

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL
RAILROAD AND FINANCIAL NEWSPAPER.

BREADSTUFFS AT SOUTHERN PORTS.

The value of breadstuffs exported from this country in the nine months ending with September, 1901, was \$213,293,084, an increase of \$38,762,936, or 22 per cent., over the same period last year. The progressive record in this respect made at Southern ports is shown by the following figures of the values of such exports in the nine months of 1900 and 1901:

Ports.	1900.	1901.	Increase.
Baltimore.....	\$24,049,516	\$34,512,432	\$10,462,916
Newport News.....	11,932,253	13,786,362	1,854,109
Norfolk.....	2,468,321	2,914,081	445,760
Galveston.....	6,739,045	10,497,028	3,757,983
Mobile.....	990,873	1,488,948	498,075
New Orleans.....	12,510,604	22,618,210	10,098,516
Total.....	\$58,690,702	\$85,817,061	\$27,117,359

The increase at Southern ports was 69 per cent. of the increase at all ports of the country.

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VOL. XL.
No. 13.

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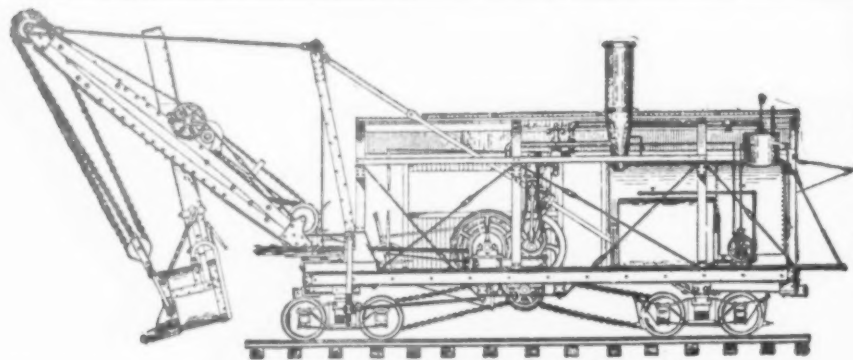
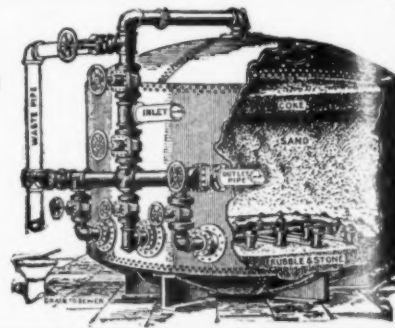
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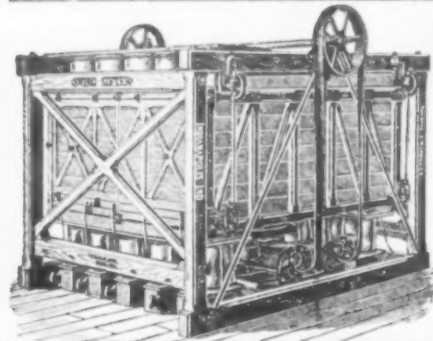
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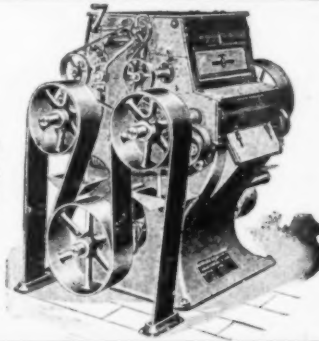
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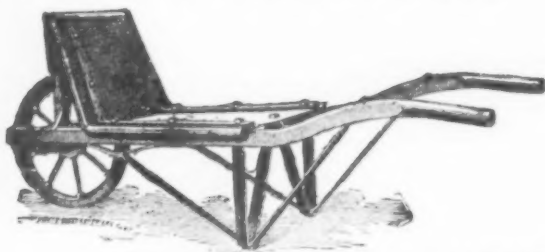
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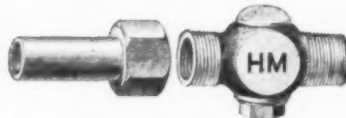
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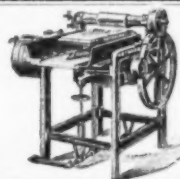
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Vaik & Murdoch Iron Wks., Charleston, S. C.

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Hench & Dromgold, York, Pa.

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Sullivan Machinery Co., Chicago, Ill.
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Merchant & Co., Inc., Philadelphia, Pa.
Ryan, J. J., & Co., Chicago, Ill.

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Magnolia Metal Co., New York, N. Y.
Ryan, J. J., & Co., Chicago, Ill.

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Southern Asbestos Mfg. Co., Richmond, Va.

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Babbitt Metal. (See Anti-Friction Metal.)

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- Cars.** (Passenger and Freight.) [See Railroad Equipment and Supplies.]
- Car Couplers and Knuckles.**
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Stanley Electric Mfg. Co., Pittsfield, Mass.

Tower-Binford Elec. & Mfg. Co., Richmond, Va.

Triumph Electric Co., Cincinnati, O.

Victor Electric Co., Chicago, Ill.

Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.

Electric Contractors.

Alexander, Jr., Co., S. B., Charlotte, N. C.

Jenks, W. H., Richmond, Va.

Northern Elec. Mfg. Co., Madison, Wis.

Stanley Elec. Mfg. Co., Pittsfield, Mass.

Tower-Binford Elec. & Mfg. Co., Richmond, Va.

Electrical Instruments.

Bunnell, J. H. & Co., New York, N. Y.

Northern Electric Supply Co., Madison, Wis.

Stanley Electric Mfg. Co., Pittsfield, Mass.

Electric-Light and Power Plants.

Alexander, Jr., Co., S. B., Charlotte, N. C.

Commercial Electric Co., Indianapolis, Ind.

Crocker-Wheeler Co., Amers, N. Y.

General Electric Co., Schenectady, N. Y.

General Incandescent Arc Light Co., New York, N. Y.

N. J. Foundry & Machine Co., Plainfield, N. J.

Northern Electrical Mfg. Co., Madison, Wis.

Ridgway Dynamo & Engine Co., Ridgway, Pa.

Smethurst & Allen, Philadelphia, Pa.

Sprague Electric Co., New York, N. Y.

Stanley Electric Mfg. Co., Pittsfield, Mass.

Tower-Binford Elec. & Mfg. Co., Richmond, Va.

Triumph Electric Co., Cincinnati, O.

Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.

Electric Railway Equipment.

Alexander, Jr., Co., S. B., Charlotte, N. C.

General Electric Co., Schenectady, N. Y.

Northern Electrical Mfg. Co., Madison, Wis.

Sprague Electric Co., New York, N. Y.

Stanley Electric Mfg. Co., Pittsfield, Mass.

Triumph Electric Co., Cincinnati, O.

Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.

Electric Repairs.

Alexander, Jr., Co., S. B., Charlotte, N. C.

General Incandescent Arc Light Co., New York, N. Y.

Guarantee Electric Co., Chicago, Ill.

Kentucky Electrical Co., Owensboro, Ky.

Smith, Samuel J. & Co., Charlotte, N. C.

Tower-Binford Elec. & Mfg. Co., Richmond, Va.

Electrical Supplies.

Alexander, Jr., Co., S. B., Charlotte, N. C.

Bunnell, J. H. & Co., New York, N. Y.

General Electric Co., Schenectady, N. Y.

Guarantee Electric Co., Chicago, Ill.

Jenks, W. H., Richmond, Va.

Johns Mfg. Co., H. W., New York, N. Y.

Kentucky Electrical Co., Owensboro, Ky.

McCoy Engineering Co., Baltimore, Md.

Northern Electrical Mfg. Co., Madison, Wis.

Smith, Samuel J. & Co., Charlotte, N. C.

Stanley Electric Mfg. Co., Pittsfield, Mass.

Sturtevant Co., B. F., Boston, Mass.

Tower-Binford Elec. & Mfg. Co., Richmond, Va.

Triumph Electric Co., Cincinnati, O.

Western Electrical Supply Co., St. Louis, Mo.

Electric Locomotives. (See Locomotive Builders.)

Electric Locomotives.

Baldwin Locomotive Works, Philadelphia, Pa.

Electrotypers.

American Type Foundry Co., Baltimore, Md.

Spencer & Hall, Baltimore, Md.

Elevators.

Albro-Clem Elevator Co., Philadelphia, Pa.

Aultman Co., The Canton, O.

Bartlett, Hayward & Co., Baltimore, Md.

Bates, James, Sons, Baltimore, Md.

Craig Ridgway Co., Coatesville, Pa.

Curran, Jas. H., Elevator Co., Cincinnati, O.

Eaton & Prince Co., Chicago, Ill.

Fairmount Machine Co., Philadelphia, Pa.

Faunt Le Roy & Co., Baltimore, Md.

Link-Belt Engineering Co., Philadelphia, Pa.

Maryland Foundry & Machine Co., Baltimore, Md.

Morse, Williams & Co., Philadelphia, Pa.

Parkhurst Bros. & Co., Indianapolis, Ind.

Park Mfg. Co., Charlotte, N. C.

Spidel, J. G., Reading, Pa.

Union Elevator & Machine Co., Chicago, Ill.

Westbrook, J. B., Fdry. & Mch. Co., Danville, Va.

Elevator Buckets.

Coldwell, H. W. & Son Co., Chicago, Ill.

Clark Co., The W. J., Salem, O.

Dodge Mfg. Co., Milwaukee, Ind.

Jeffrey Mfg. Co., Columbus, O.

Link-Belt Engineering Co., Philadelphia, Pa.

Tate, Jones & Co., Pittsburgh, Pa.

Elevator Enclosures and Cabs.

Balderson, H. & Son, Baltimore, Md.

Bolles, J. E. & Son, Wire Works, Detroit, Mich.

Dow Wire Work Co., Louisville, Ky.

Dufur & Co., Baltimore, Md.

Ludlow-Saylor Wire Co., The St. Louis, Mo.

Myers Mfg. Co., The Fred J., Hamilton, O.

Elevator Ropes. (See Wire Ropes.)

Emery.

Carborundum Co., The Niagara Falls, N. Y.

Scranton Corundum & Emery Wheel Co., Scranton, Pa.

Tanite Co., The Stroudsburg, Pa.

Emery Wheels. (See Grinding and Polishing Machinery.)

Alber & Byrne, Birmingham, Ala.

Adams, Henry, Baltimore, Md.

American Bridge Co., New York, N. Y.

Blanton, Jr., E. A., Philadelphia, Pa.

Collier & Brown, Atlanta, Ga.

Erikson, Edw. E., Pittsburg, Pa.

Given, Wm. M., Birmingham, Ala.

Hall, Charles A., M. E., Mobile, Ala.

Hutton Engineering Co., Lexington, Va.

Kennedy, Walter, Pittsburgh, Pa.

Lederle, Frank, Atlanta, Ga.

Marrow, W. Drummond, Charlotte, N. C.

Morrison & Kindervater, Richmond, Va.

Nicol, T. W., Mobile, Ala.

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Pratt Laboratory, N. F., Atlanta, Ga.

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Thorburn Reid, New York, N. Y.

Tower-Binford Elec. & Mfg. Co., Richmond, Va.

Virginia Bridge & Iron Co., Roanoke, Va.

Wetherow, Jas. P., Pittsburg, Pa.

Engines.

Alexander, Jr., Co., S. B., Charlotte, N. C.

American Blower Co., Detroit, Mich.

Atlas Engine Works, Indianapolis, Ind.

Ball Engine Co., The Erie, Pa.

Ball & Wood Co., New York, N. Y.

Boston Blower Co., Hyde Park, Mass.

Brownell, The & Co., Dayton, O.

Buffalo Forge Co., Buffalo, N. Y.

Cameron & Barkley Co., Charleston, S. C.

Chicago House Wrecking Co., Chicago, Ill.

Farquhar Co., A. B., Ltd., York, Pa.

Frick Co., Waynesboro, Pa.

Gibbs, W. H. & Co., Columbia, S. C.

Greenwald Co., I. & A., Cincinnati, O.

Hardie-Tynes Fdy. & Mch. Works, Birmingham, Ala.

Harrisburg Fdry. & Mch. Works, Harrisburg, Pa.

High Point Machine Works, High Point, N. C.

Hill, Wm. E. & Co., Kalamazoo, Mich.

International Power Co., Providence, R. I.

Lefel, James & Co., Springfield, O.

Lidgerwood Mfg. Co., New York, N. Y.

Lombard Iron Works & Supply Co., Atlanta, Ga.

McClave, Hamilton & Rimmer, New York, N. Y.

McIntosh, Seymour & Co., New York, N. Y.

Murray Iron Works Co., Burlington, Iowa.

Mechlenburg Iron Works, Charlotte, N. C.

Minnigerode, Wm., Lynchburg, Va.

Newport News Shipbldg. & Dry Dock Co., N. News, Va.

Phillips, Edward W., Baltimore, Md.

Phoenix Iron Works Co., Meadville, Pa.

Remington Machine Co., Wilmington, Del.

Ridgway Dynamo & Engine Co., Ridgway, Pa.

Salem Iron Works, Winston-Salem, N. C.

Schofield, J. S. Sons Co., Macon, Ga.

Smith-Corbin Co., Richmond, Va.

Southern Eng. & Boiler Works, Jackson, Tenn.

Southwest Foundry & Machine Co., Philadelphia, Pa.

St. Louis Iron & Machine Works, St. Louis, Mo.

Struthers, Wells & Co., Warren, Pa.

Sturtevant Co., B. F., Boston, Mass.

Union Iron Works Co., Selma, Ala.

Valk & Murdoch Iron Works, Charleston, S. C.

Valley Iron Works, Williamsport, Pa.

Vetter Mfg. Co., Milwaukee, Wis.

Wetherill, Robert & Co., Chester, Pa.

Westinghouse Machine Co., Pittsburg, Pa.

York Mfg. Co., York, Pa.

Engines. (Gas and Gasoline.)

Blakeslee Mfg. Co., The Birmingham, Ala.

Columbus Machine Co., Columbus, O.

Cornell Machine Co., Chicago, Ill.

Fairbanks Co., Baltimore, Md.

Olds Motor Works, Detroit, Mich.

Otto Gas Engine Works, Philadelphia, Pa.

Struthers, Wells & Co., Warren, Pa.

Westinghouse Machine Co., Pittsburg, Pa.

Engines. (Gas and Kerosene.)

Metz, A., New York, N. Y.

Engines. (Oil.)

Aultman Co., The Canton, O.

Engravers.

Alpha-Photo Engraver Co., Baltimore, Md.

Baltimore Engraving Co., Baltimore, Md.

Middleton, J. W., Chicago, Ill.

Exhaust Heads.

Bonar, James & Co., Pittsburg, Pa.

Burt Mfg. Co., Akron, O.

Sterling Blower & Pipe Mfg. Co., Hartford, Conn.

Exhausters.

Cornell, J. B. & J. M., New York, N. Y.

Expansion Belts.

New Jersey Foundry & Machine Co., Plainfield, N. J.

Fans. (Electric Ceiling, etc.)

Paragon Fan & Motor Co., New York, N. Y.

Fans. (Ventilating.) (See Blowers, Exhaust Fans.)

Feed-Water Heaters and Purifiers.

Berryman, Jas., Philadelphia, Pa.

Bonar, James & Co., Pittsburg, Pa.

Gem City Boiler Co., Dayton, O.

Green Fuel Economizer Co., Mattawan, N. Y.

Harrison Safety Boiler Works, Philadelphia, Pa.

Hawley Down Draft Furnace Co., The Atlanta, Ga.

Kelley, Benj. F. & Son, New York, N. Y.

National Pipe Bending Co., New Haven, Conn.

Park Mfg. Co., Charlotte, N. C.

Patterson, Frank L., New York, N. Y.

Phillips, E. W., Baltimore, Md.

Phoenix Iron Works Co., Meadville, Pa.

Scaife, Wm. B. & Sons, Pittsburg, Pa.

Stillwell-Bierce & Smith-Valle Co., Dayton, O.

Taunton Locomotive Mfg. Co., The Taunton, Mass.

Warren Webster Co., Exmden, N. J.

Felling. (Hair.)

Baeder, Adamson & Co., Philadelphia, Pa.

Fencing. (Iron and Wire.)

Balderson, H. & Son, Baltimore, Md.

Bolles Iron & Wire Works, J. E., Detroit, Mich.

Burger Iron & Wire Works, Co., Akron, O.

Chandless Fence Co., Baltimore, Md.

Dow Wire Works Co., Louisville, Ky.

Dufur & Co., Baltimore, Md.

Eureka Supply Co., Chattanooga, Tenn.

Ludlow-Saylor Wire Co., St. Louis, Mo.

New Jersey Wire Cloth Co., Trenton, N. J.

Fertilizer Machinery. (See Phosphate Mch.)

Files.

Barnett Co., G. & H., Philadelphia, Pa.

Bealy, Chas. H. & Co., Chicago, Ill.

Nicholson File Work, Providence, R. I.

Filters. (Water.)

Hammond Iron Works, Warren, Pa.

Industrial Water Co., New York, N. Y.

Kennicott Water Softener Co., Chicago, Ill.

N. Y. Continental Jewell Filtration Co., New York, N. Y.

Scaife, Wm. B. & Sons, Pittsburg, Pa.

Watson, N. A., Erie, Pa.

Filters. (Oil.)

Bonar, James & Co., Pittsburg, Pa.

Burt Mfg. Co., The Akron, O.

Flower, Walter L. & Co., St. Louis, Mo.

Textile Mill Supply Co., Charlotte, N. C.

Filter Presses.

Johnson, J. & Co., New York, N. Y.

Stillwell-Bierce & Smith-Valle Co., Dayton, O.

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Pawtucket,	- R. I.
Anderson,	- Ind.
Paterson,	- N. J.
Beaver Falls,	Pa.
Kent,	- Ohio.

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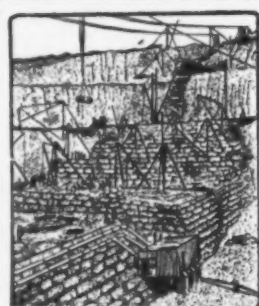
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Crushing test after 28 days 202 Tons per cubic foot.
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FALCON WHITE ASH MOSHANNON COAL.

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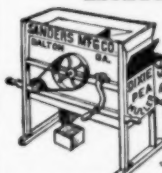
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143 Milk Street, Boston.
182 Lake Street, Chicago.

Classified Index of Advertisers.

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Fire Extinguishers.

Bailey-Lobby Co., The, Charleston, S. C.
Childs Co., O. J., Utica, N. Y.
General Fire Extinguisher Co., Providence, R. I.
International Sprinkler Co., Philadelphia, Pa.

Fire Escapes.

Bell Iron & Wire Works, J. E., Detroit, Mich.
Dow Wire Works Co., Louisville, Ky.

Flooring. (Polished Hardwood.)

Adams, J. M., Baltimore, Md.
Wilco Co., The T., Chicago, Ill.

Flour and Grist Mill Machinery and Supplies.

Aling Co., Inc., J. R., Brooklyn, N. Y.
Caldwell, H. W., & Son Co., Chicago, Ill.
Dehner-Wuerpel Mill Bldg. Co., St. Louis, Mo.
DeLoach Mill Mfg. Co., Atlanta, Ga.
Kordyke & Marmon Co., Indianapolis, Ind.
Salem Machine Works, Salem, Va.
Sprout, Waldron & Co., Muncy, Pa.
Starr, B. F., & Co., Baltimore, Md.
Wolf Co., Chambersburg, Pa.

Forges.

Boston Blower Co., Hyde Park, Mass.
Buffalo Forge Co., Buffalo, N. Y.
Sturtevant Co., S. F., Boston, Mass.

Foundry Equipment and Supplies.

Billing, Edw. J., Philadelphia, Pa.
Hill & Griffith Co., Cincinnati, O.
Obermayer Co., S., Cincinnati, O.

Foundry Ladles. [See Foundry Equipment]

Fruit Evaporators.

Wilson, H. McK., & Co., St. Louis, Mo.

Fuel Economiser.

Broomell, Schmidt & Co., Ltd., York, Pa.
Green Fuel Economiser Co., Matlewan, N. Y.

Fuel Oil Equipment and Machinery.

Petroleum Iron Works Co., Washington, Pa.
Rockwell Engineering Co., New York.

Furnace Builders.

Erikson, Edw. E., Pittsburgh, Pa.
Kennedy, Walter, Pittsburgh, Pa.
Means & Fulton Iron Works, Birmingham, Ala.
Witherow, Jas. P., Pittsburgh, Pa.

Furnace Heating. (Stoves.)

Richmond Stove Co., Norwich, Conn.

Furnaces. (Metallurgical.)

Rockwell Engineering Co., New York, N. Y.

Furnaces. (Gas Soldering.)

Jacobson Mch. Mfg. Co., Warren, Pa.
Fuse. (Wire Blocks, Fuses, etc.)
American Electric Fuse Co., Adrian, Mich.

Gages (Recording) and Counters.

American Steam Gauge Co., Boston, Mass.
Crosby Steam Gauge & Valve Co., Boston, Mass.

Galvanized Sheets.

American Sheet Steel Co., New York, N. Y.

Gas Regulator.

Jacobson Machine Manufacturing Co., Warren, Pa.

Gas Producers.

Erikson, Edw. E., Pittsburgh, Pa.
Smythe Co., The S. E., Pittsburgh, Pa.
Wood, R. D., & Co., Philadelphia, Pa.

Gas and Steam Fitters' Tools.

Banders' Sons, D., Yonkers, N. Y.

Gaskets. (Rubber.)

Boston Belting Co., Boston, Mass.

Gear Cutting Machines.

Whitson Machine Co., D. E., New London, Conn.

Gears and Pinions. (Raw Hide.)

New Process Rawhide Co., Syracuse, N. Y.

Gearing.

Chester Steel Castings Co., Philadelphia, Pa.
Fairmount Machine Co., Philadelphia, Pa.
Jeffrey Mfg. Co., The, Columbus, O.

Link-Belt Engineering Co., Philadelphia, Pa.
Morse, Williams & Co., Philadelphia, Pa.
New Process Rawhide Co., Syracuse, N. Y.

Smith Co., S. Morgan, York, Pa.
Wood's Sons, T. E., Chambersburg, Pa.

Geologists.

Cattell, Chas., Staunton, Va.

Graphophone. (Phonographs)

Columbia Phonograph Co., Baltimore, Md.

Grates and Grate Bars.

McClave, Brooks & Co., Scranton, Pa.

Grates. (Domestic.)

Burnham Grate Co., Huntsville, Ala.

Grain Elevator Supplies.

Aultman Co., The, Canton, O.

Caldwell, H. W., & Son Co., Chicago, Ill.
Clark Co., The W. J., Salem, O.

Dodge Mfg. Co., Mishawaka, Ind.
Jeffrey Mfg. Co., Columbus, O.

Link-Belt Engineering Co., Nicetown, (Phila.) Pa.

Graphite.

Detroit Graphite Mfg. Co., Detroit, Mich.

Dixon Crucible Co., Jos., Jersey City, N. J.

Hill & Griffith Co., Cincinnati, O.

Greases. (Lubricating.)

Cook's Sons, Adam, New York, N. Y.

Robinson, Wm. C., & Son, Baltimore, Md.

Grinding and Polishing Mch.

Abusive Machinery Co., The, Philadelphia, Pa.

Builders' Iron Foundry, Providence, R. I.

Carborundum Co., The, Niagara Falls, N. Y.

Norton Emery Wheel Co., Worcester, Mass.

Scranton Corundum & Emery Wheel Co., Scranton, Pa.

Sturtevant Mill Co., Boston, Mass.

Tanite Co., The, Stroudsburg, Pa.

Vitroff Wheel Co., Westfield, Mass.

Groovers.

Hether Bros., Rochester, N. Y.

Hammers. (Steam and Power.)

Dupont Mfg. Co., St. Johnsbury, Vt.

Robinson, J. M., & Co., Cincinnati, O.

Handle Mch. [See Woodwork's Mch.]

Egan Co., The, Cincinnati, O.

Fay, J. A., & Co., Cincinnati, O.

Root, B. M., York, Pa.

Trevor Mfg. Co., Lockport, N. Y.

Hardware Specialties.

Covert Mfg. Co., West Troy, N. Y.

Cronk Hanger Co., Elmira, N. Y.

Schaefer, W. J., & Co., New York, N. Y.

Wrightsville Hardware Co., Wrightsville, Pa.

Hardwood Flooring.

Adams, J. M., Baltimore, Md.

Wilco Co., The T., Chicago, Ill.

Hay Tools.

Myers & Bro., F. E., Ashland, O.

Heating Apparatus.

American Blower Co., Detroit, Mich.

Boston Blower Co., Hyde Park, Mass.

Dowman Mfg. Co., Atlanta, Ga.

Exeter Machine Works, Exeter, N. H.

Monitor Steam Generator Mfg. Co., Baltimore, Md.

Peck-Hammond Co., The, Cincinnati, O.

Richmond Stove Works, Norwich, Conn.

Sturtevant Co., S. F., Boston, Mass.

Vapor Heating Co., York, Pa.

Warren Webster Co., Camden, N. J.

Hoisting Machinery.

Byers Machine Co., John F., Bayanna, O.

Carlin Machine & Supply Co., Allegheny, Pa.

Cass Manufacturing Co., The, Columbus, O.

Contractors' Plant Mfg. Co., Buffalo, N. Y.

Exeter Machine Works, Pittsford, Pa.

Hardie-Tynes Fdy. & Mch. Co., Birmingham, Ala.

Hunt Co., G. W., West New Brighton, N. Y.
Jeffrey Mfg. Co., The, Columbus, O.

Link-Belt Engineering Co., Philadelphia, Pa.
Lidgerwood Mfg. Co., New York, N. Y.

Males Co., The, Cincinnati, O.
Robinson Machine Co., Menongahela, Pa.

Sullivan Machinery Co., Chicago, Ill.

Hoses.

Boston Belting Co., Boston, Mass.

Eureka Fire Hose Co., New York, N. Y.

N. J. Car Spring & Rub. Co., Jersey City, N. J.

Peerless Rubber Mfg. Co., New York, N. Y.

Rhoads, J. E., & Sons, Wilmington, Del.

Textile Mill Supply Co., Charlotte, N. C.

Hose Couplings.

Clark Co., W. J., Salem, O.

Hose Reel. (Fire.)

Cliff & Guilbert Co., New York, N. Y.

Hotels.

New Atlantic Hotel, Norfolk, Va.

Hydrants.

Glamorgan Pipe & Foundry Co., Lynchburg, Va.

Ludlow Valve Mfg. Co., Troy, N. Y.

Wood, R. D., & Co., Philadelphia, Pa.

Hydraulic Machinery.

Smythe Co., The S. E., Pittsburgh, Pa.

Wood, R. D., & Co., Philadelphia, Pa.

Ice Making Machinery & Supplies.

Arctic Mch. Co., Canton, O.

Barber Mfg. Co., A. H., Chicago, Ill.

Cochran Co., Lorain, O.

Frick Co., Waynesboro, Pa.

Healy Ice Machine Co., Chicago, Ill.

Remington Machine Co., Wilmington, Del.

Singer Automatic Ice Mch. Co., Bridgeport, Conn.

Stillwell-Bierce & Smith-Valle Co., Dayton, O.

Viller Mfg. Co., Milwaukee, Wis.

Wolf Co., The Fred W., Chicago, Ill.

York Mfg. Co., York, Pa.

Incorporators. (Companies.)

Delaware Trust Co., Wilmington, Del.

Hornaday, J. P., Cincinnati, O.

Magid, Louis B., & Co., New York, N. Y.

Indicators. (Steam Engines.)

American Steam Gauge Co., Jamaica Plain, Mass.

Crosby Steam Gauge & Valve Co., Boston, Mass.

Industrial Railways.

Hunt Co., G. W., West New Brighton, N. Y.

Stuebner Iron Works, G. L., Long Island City, N. Y.

Injectors.

American Injector Co., Detroit, Mich.

Jenkins Bros., New York, N. Y.

Langenhelmer Co., Cincinnati, O.

Ohio Injector Co., Wadsworth, Ohio.

Penberthy Injector Co., Detroit, Mich.

Watson, N. A., Erie, Pa.

Insurance.

Harford Steam Boiler Inspection & Insurance Co., Hartford, Conn.

Maryland Casualty Co., Baltimore, Md.

Insulator Pins—Telephone Poles.

New Orleans Wood Preserving Wks., New Orleans, La.

Tennessee Lumber Co., Lewisburg, Tenn.

Insulated Wire.

Hazard Manufacturing Co., Wilkes Barre, Pa.

Insulators—Connectors.

American Electric Fuse Co., Adrian, Mich.

Iron.

Alabama Consol. Coal & Iron Co., Birmingham, Ala.

American Iron & Steel Mfg. Co., Lebanon, Pa.

American Sheet Steel Co., New York, N. Y.

American Steel Hoop Co., Pittsburgh, Pa.

Iron Brokers.

Armstrong, R. S., & Bro., Atlanta, Ga.

Cox, Jr., Justice, & Co., Inc., Philadelphia, Pa.

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Excelsior Knitting Machine Co., Allentown, Pa.

Mayo Knitting Machine & Needle Co., Franklin, N. H.

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Nye & Treddick, Philadelphia, Pa.

Scott & Williams, Philadelphia, Pa.

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Shelby Electric Co., Shelby, O.

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Klison Hydro Carbon, H. & I. L., Co., Phila., Pa.

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Connor, W. D., St. George, S. C.

Hornaday, J. P., Cincinnati, O.

Killebrew, J. B., Industrial and Immigration Agent, Nashville, Tenn.

Richards, M. V., Land & Industrial Agt., Wash., D. C.

Sutherland, Howard, Land Agent, Elkins, W. Va.

Watson, R. E., Atlanta, Ga.

Lanterns.

Diets Co., E. E., New York.

Lathes. (Engine.)

American Tool Works Co., Cincinnati, O.

McCabe, J. J., New York, N. Y.

Schumacher & Boye, Cincinnati, O.

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Adams Laundry Machinery Co., Troy, N. Y.

Sinclair Co., S. E., Chicago, Ill.

Wilson Laundry Machinery Co., Columbia, Pa.

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Robertson Mfg. Co., James, Baltimore, Md.

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Hertz, Theo., & Son, St. Louis, Mo.

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Carolina Portland Cement Co., Charleston, S. C.

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Baldwin Locomotive Works, Philadelphia, Pa.

Climax Mfg. Co., Corry, Pa.

Males Co., Cincinnati, O.

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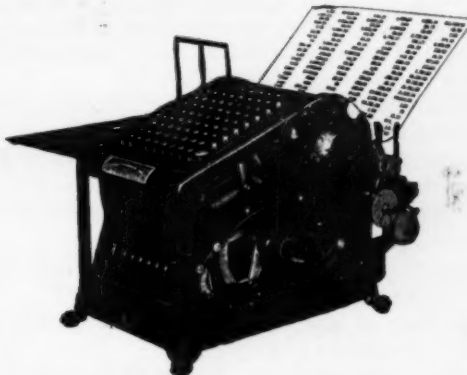
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have made for themselves an enviable reputation because they fulfill our claims of superiority over other makes—because they do just what we say they will do—produce the highest quality of concrete at the lowest possible cost, in almost unlimited quantities.

We do not claim that we make the only good mixer on the market; we do claim, however, that we make the best one, and feel certain that we can prove this assertion to your entire satisfaction.

The Drum Type of portable mixer possesses among others these features:

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No elevating of feed material.

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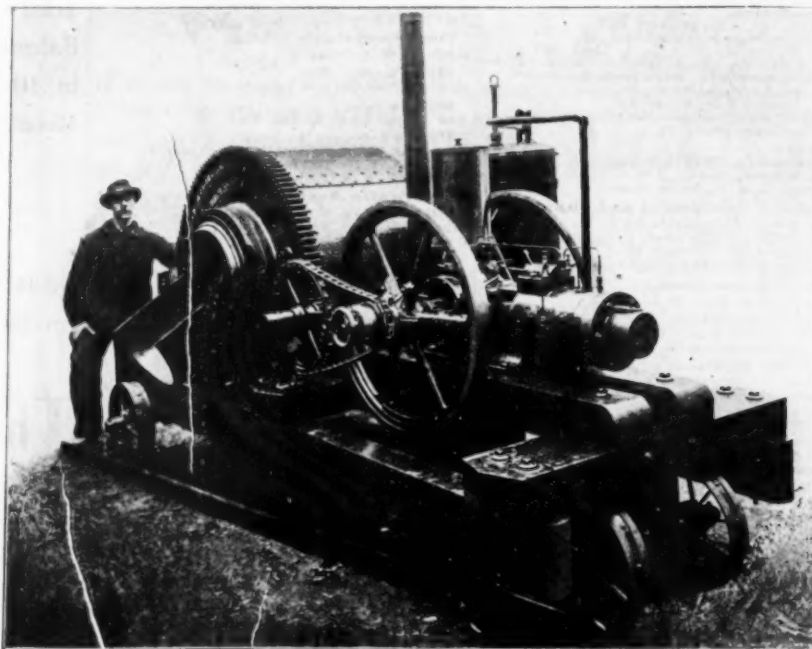
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Very truly yours,

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Mixers that will more than substantiate the claims we make for our machines must be about as near the acme of perfection as experienced and skilled designers can make them.

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Lubricators and Oil Cups.
Bealy, Chas. H., & Co., Chicago, Ill.
Cook's Sons, Adam, New York, N. Y.
Crosby Steam Gauge & Valve Co., Boston, Mass.
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Perry, Nathaniel V., Atlanta, Ga.

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Schaefer, W. J., & Co., New York, N. Y.

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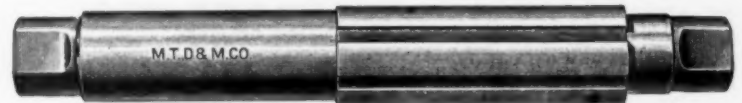
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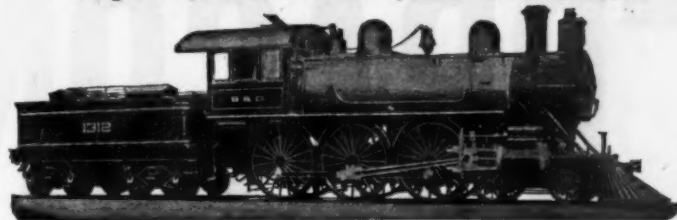
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 McGowan Co., E. H., Cincinnati, O.
 Park Mfg. Co., Charlotte, N. C.
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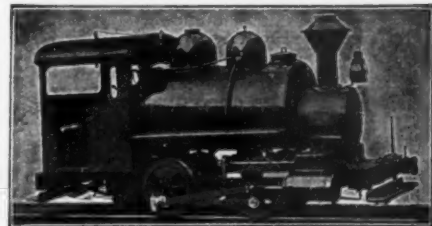
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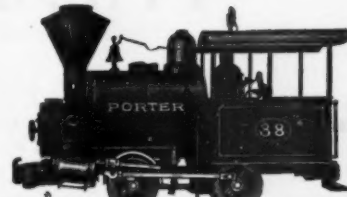
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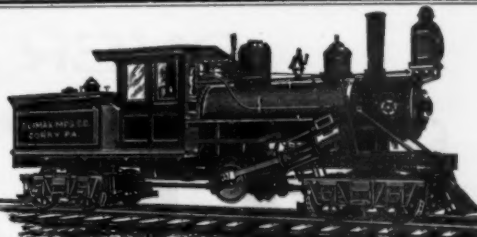
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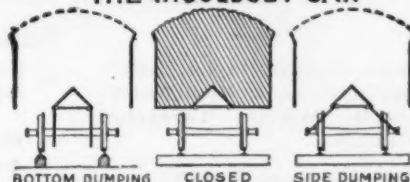


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Harrison Safety Boiler Works, Philadelphia, Pa.
Webster Warren & Co., Philadelphia, Pa.

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American Tool Works Co., Cincinnati, O.

Sheet-Metal-Working Machinery.

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Sheet Steel and Iron.

American Sheet Steel Co., New York, N. Y.

Shingle, Lath and Stave Machinery.

[See Woodworking Machinery.]

Lane Mfg. Co., Montpelier, Vt.

Trevor Mfg. Co., Lockport, N. Y.

Ship Builders. (Iron and Steel)

Newport News Shipbuilding & Dry Dock Co., Newport News, Va.

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Badger, E. B., & Sons Co., Boston, Mass.
Downman Mfg. Co., Atlanta, Ga.
Merchant & Co., Inc., Philadelphia, Pa.
National Skylight & Construction Co., New York, N. Y.
Noorden Co., E. Van, Boston, Mass.

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Galt, John, & Sons, New York, N. Y.
Genuine Bangor Slate Co., Bangor, Pa.
David McKenna, Slatington, Pa.
Williams, J. R., & Co., Arvon, Va.

Slaters' Tools.

Galt, John, & Sons, New York, N. Y.

Smoke Stacks. (Iron and Steel.)

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Keeler, E. Co., Williamsport, Pa.
Littlefield Bros., Cincinnati, Ohio.
Schofield, J. S., Sons Co., Macon, Ga.
York Mfg. Co., York, Pa.

Soapmakers' and Butchers' Mchry.

Dopp, H. Wm., & Son, Buffalo, N. Y.

Solder.

Hieris, Theo., & Son, St. Louis, Mo.
Ryan, J. J., & Co., Chicago, Ill.

Speaking Tubes.

Beely, Chas. H., & Co., Chicago, Ill.

Springs.

[Bicycle Saddle, Machinery, Railway and Spiral.]

Beely, Chas. H., & Co., Chicago, Ill.

Boston Belting Co., Boston, Mass.

Cary Spring Works, New York, N. Y.

French Spring Co., A., Pittsburg, Pa.

Latrobe Steel & Coupler Co., Philadelphia, Pa.

Ludlow-Saylor Wire Co., The, St. Louis, Mo.

Spelter.

Hieris, Theo., & Son, St. Louis, Mo.

Sprinklers. (Automatic.)

[See Fire Extinguishers.]

Stairways. (Iron.)

Lykes, John D., Birmingham, Ala.

Stamp Mills.

Mecklenburg Iron Works, Charlotte, N. C.

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Birmingham Boiler Works, Birmingham, Ala.
Hartley Boiler Works, Montgomery, Ala.
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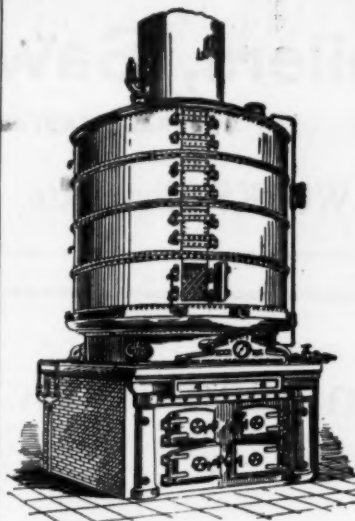
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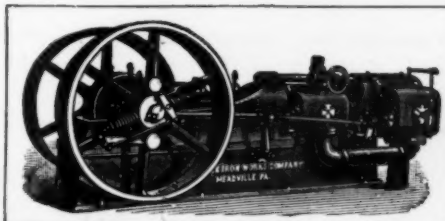
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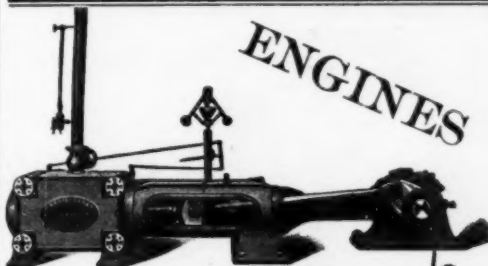
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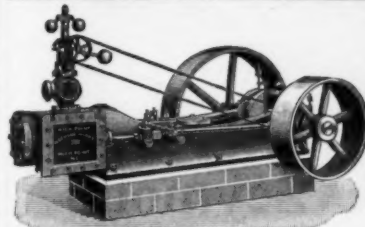
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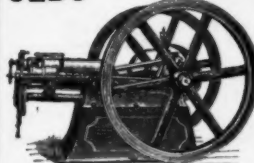
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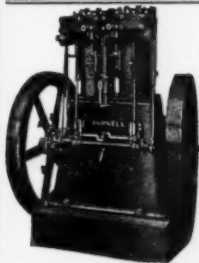
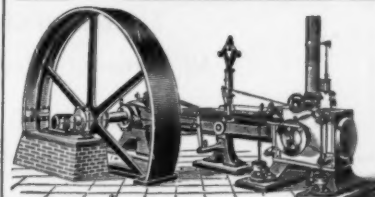
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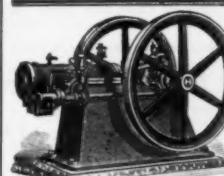
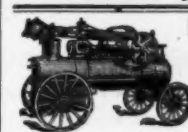
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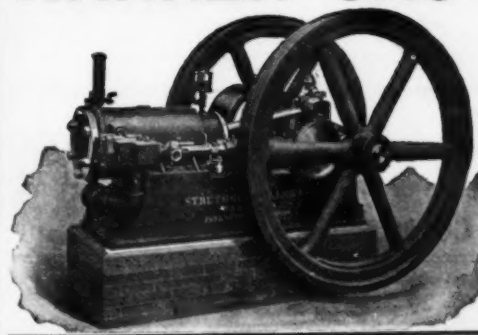
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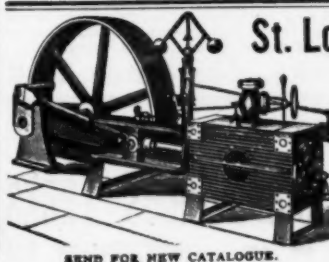
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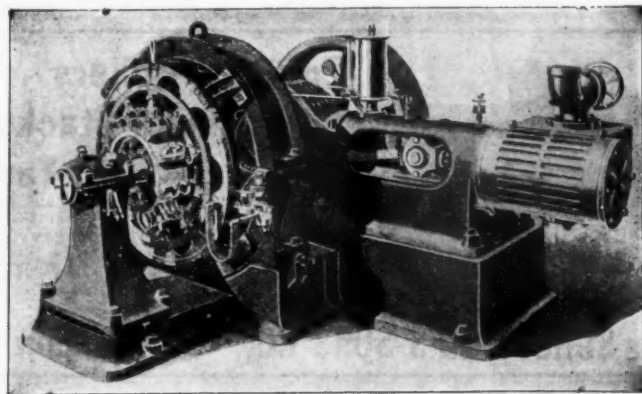
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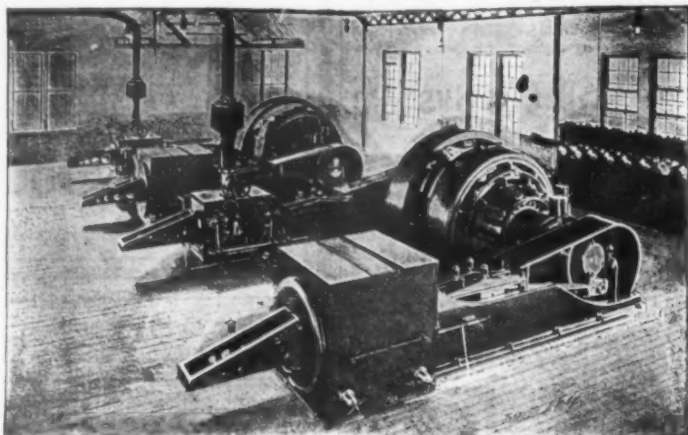
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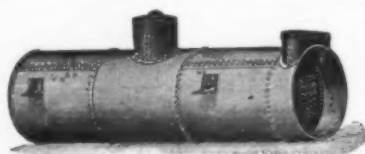
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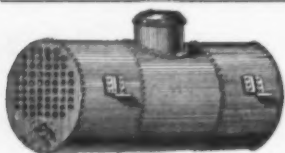
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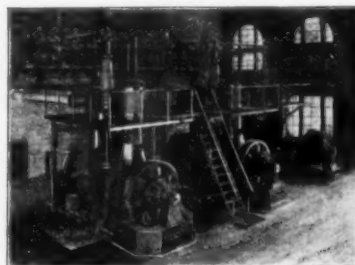
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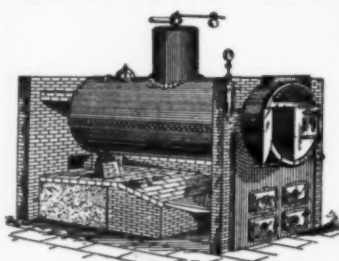
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Durable,

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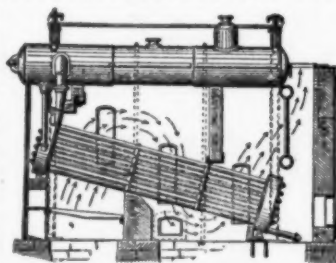
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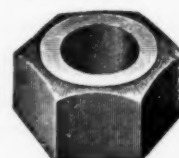
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Cast every day; work 150 hands.

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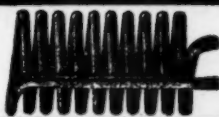
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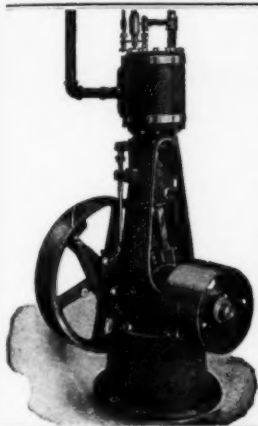
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Learn something about Engines.

If you want to learn something about

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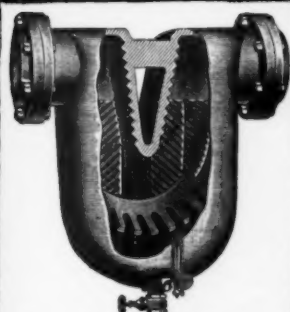


Fig. B Horizontal.

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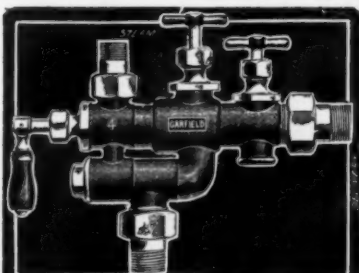
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not only give better service than other makes, but they last longer and require less repairs. They are of superior design, are extra strong and heavy, and each lubricator is tested at 300 pounds pressure to the square inch before it leaves the factory. Catalogue on application.

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for stationary engines.
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Boilers do explode and cause damage to property and sometimes destroy life or cause personal injury. Inspections carefully made tend to prevent explosion, and insurance provides indemnity against loss by explosion.

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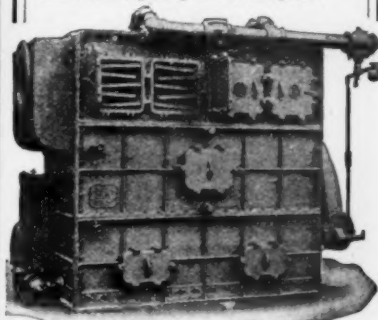
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Fuel Consumed (including 1500 lbs. used in making bottom), - - -	9,300 lbs.
Ratio of Fuel to Iron, - - - - -	1 to 11.18 lbs.

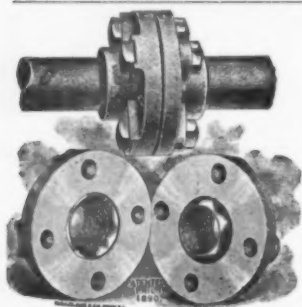
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HEATING AND VENTILATING
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And one that will Stay Tight.

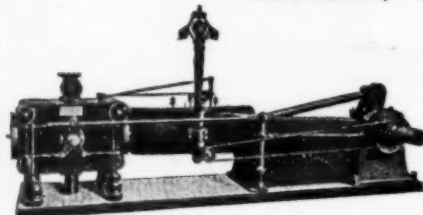
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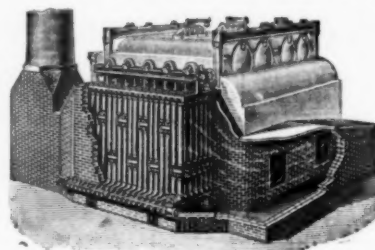
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Original Thompson
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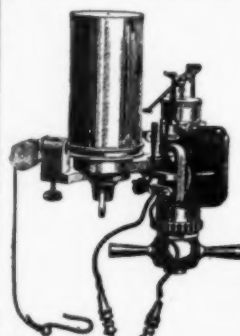
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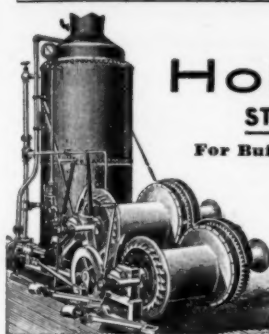
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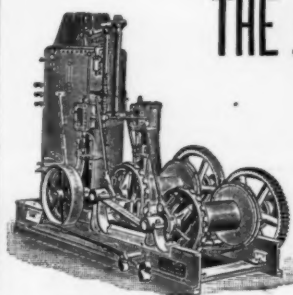
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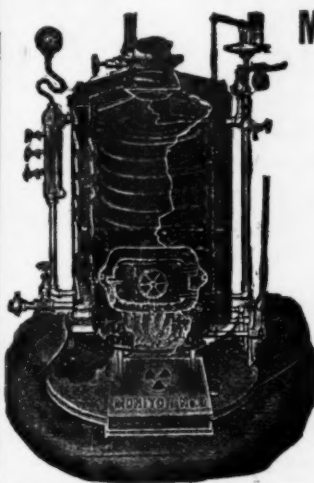
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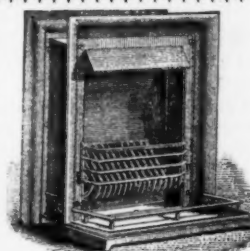
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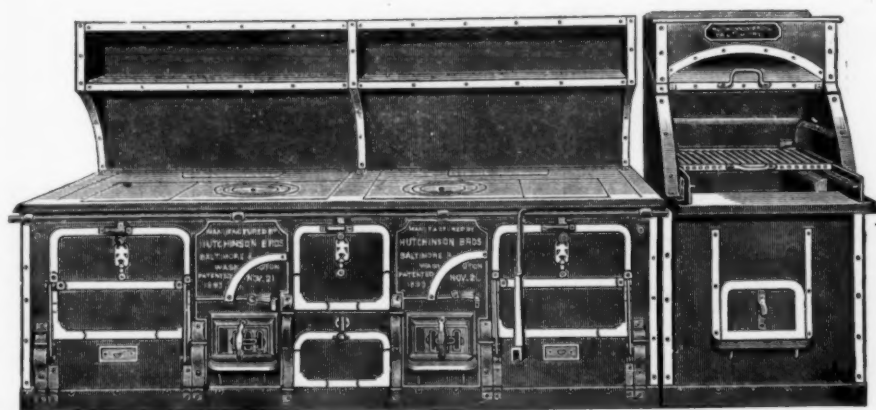
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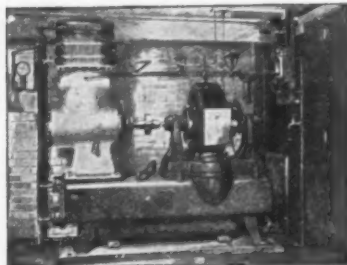
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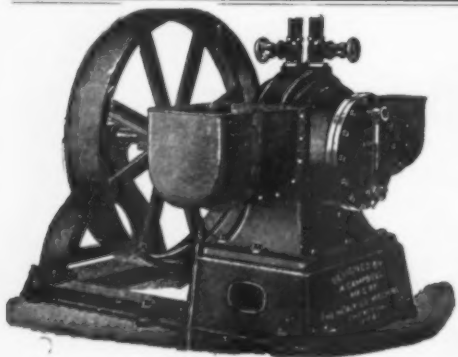
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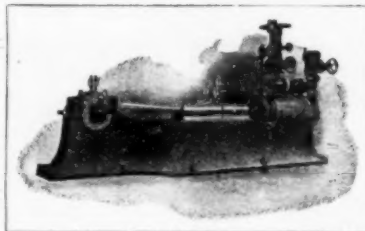
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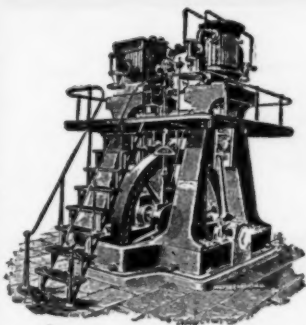
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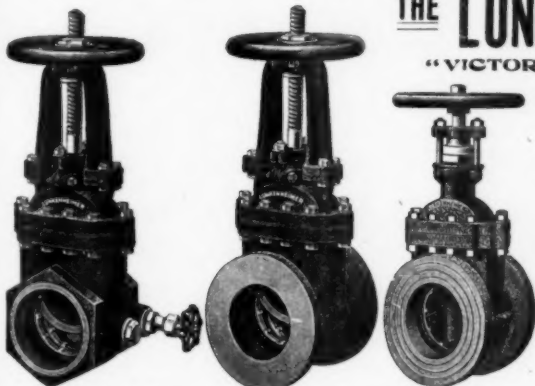


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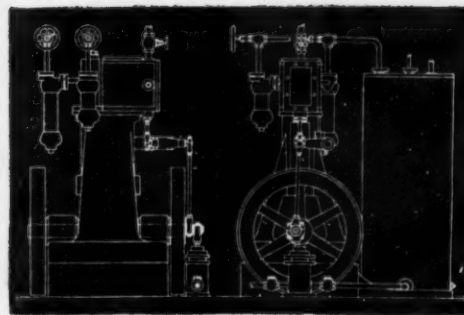
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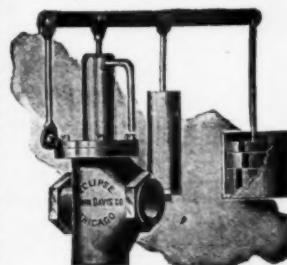
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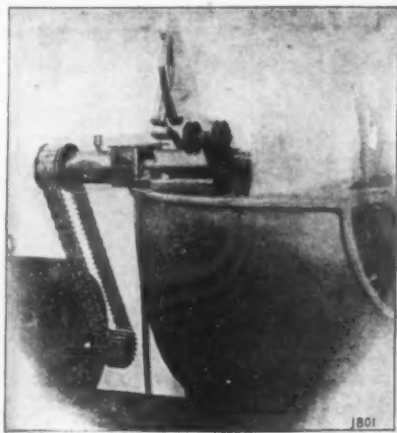
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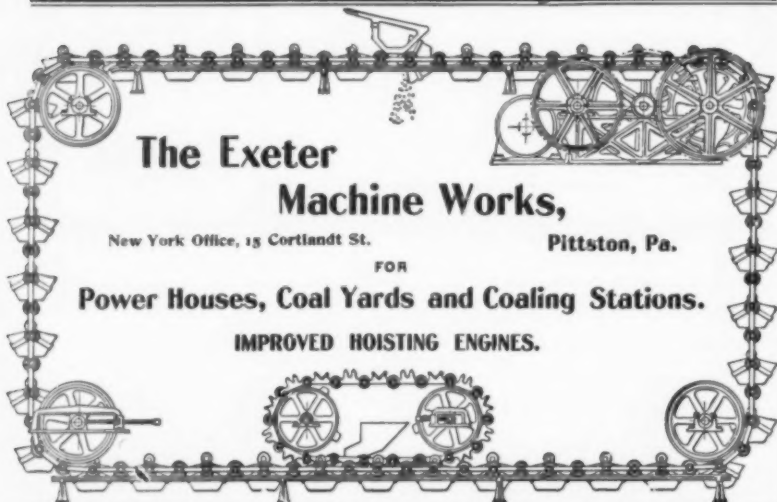
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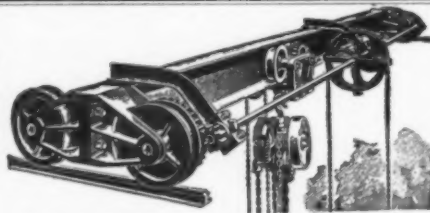
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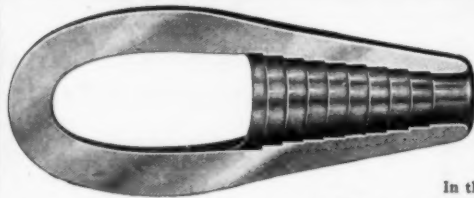
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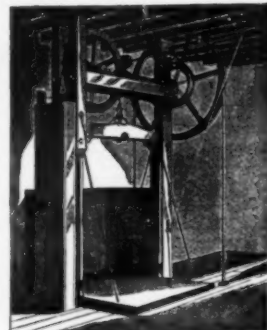
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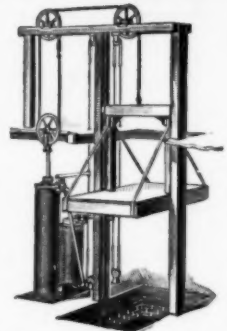
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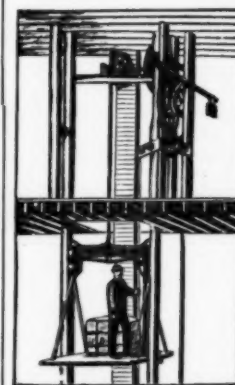
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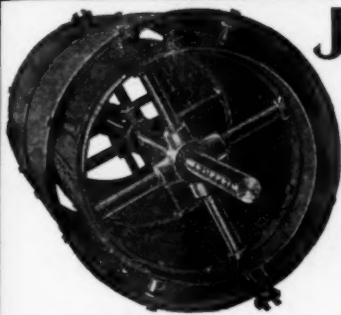
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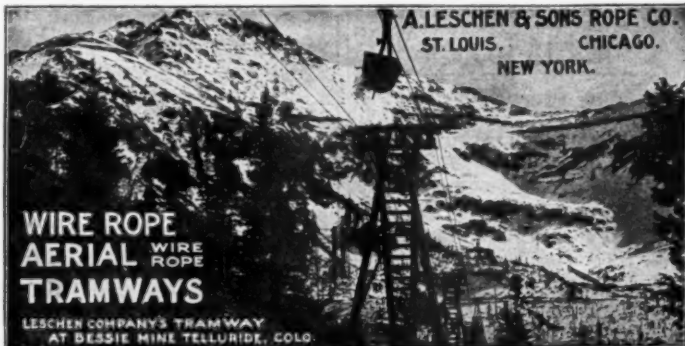
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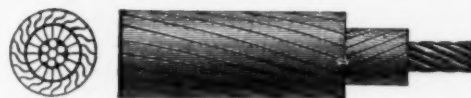


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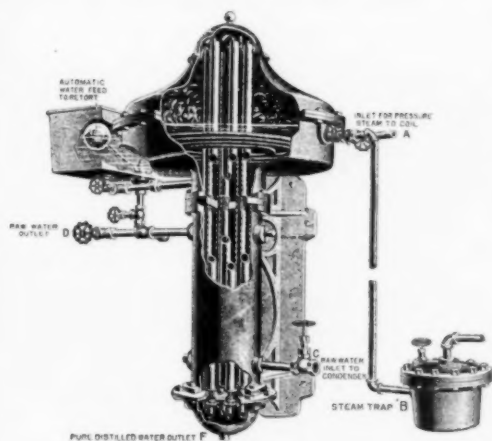
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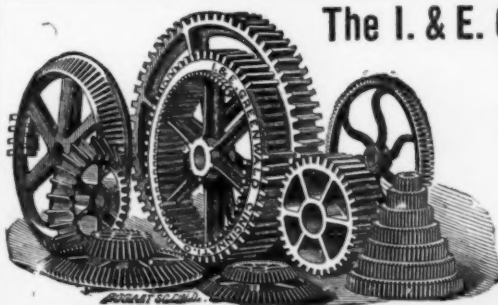
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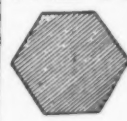
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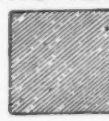
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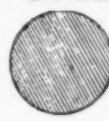
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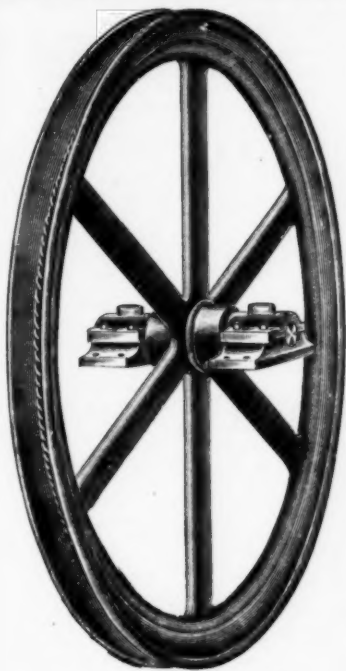
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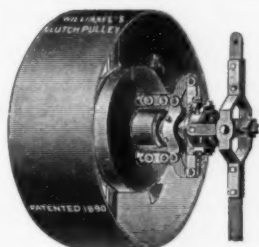
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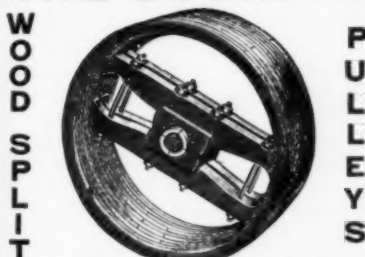
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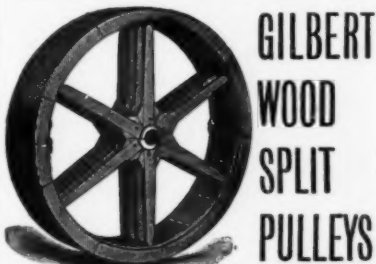
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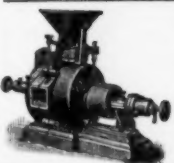
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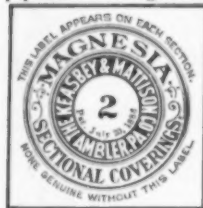
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Important Litigation Relating to Magnesia Covering Patents.

The Kearsbey & Mattison Co., the owners of the patents for magnesia covering, have commenced a suit in the United States Circuit Court for the Southern District of New York against the Philip Carey Mfg. Co., George D. Crabbs, J. E. Breese, Schoellkopf, Hartford & Hanna Co., J. F. Schoellkopf, Jr., James Hartford, W. W. Hanna, C. P. Hugo Schoellkopf and Jesse W. Starr to restrain the defendants from making and selling magnesia covering for boilers and steam pipes containing more than 50% of magnesia, and especially coverings containing 85% of magnesia.

The bill prays for a preliminary writ of injunction, to be continued during the pendency of the suit, and upon the final determination thereof to be made perpetual, and also demands an accounting and damages.

All persons are respectfully requested to refrain from purchasing covering infringing these patents, as such purchasing must of necessity lead to suit. Beware of Fraudulent so-called "Magnesia" Coverings as well as those infringing on patents.



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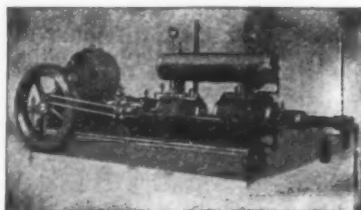
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A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

Vol. XL. No. 13.
WEEKLY.

BALTIMORE, OCTOBER 17, 1901.

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Manufacturers' Record.

RICHARD H. EDMONDS, President.
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BALTIMORE.

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RICHARD H. EDMONDS,
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BALTIMORE, OCTOBER 17, 1901.

COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

To Encourage the Building of Good Roads.

A project which will result in much practical benefit to the South is the trip of the Good Roads Special train over the entire system of the Southern Railway. Ever since the organization of the National Good Roads Association the Southern Railway has been represented at its national conventions and at many of its public demonstrations, and the plan of this trip, which is to be carried out at a heavy expense to the railroad company, is in line with the policy which the Southern Railway has persistently followed of doing everything within its power to encourage the building up of the country tributary to its 6000 miles of line. For the success of the undertaking President W. H. Moore and Secretary R. W. Richardson of the National Good Roads Association, Mr. Martin Dodge, the director of the bureau of public road inquiry of the Department of Agriculture, and his assistant, Mr. M. O. Eldridge, will co-operate with the officers of the Southern Railway. The train, which will consist of about ten cars filled with the necessary machinery for building roads, and carrying fifteen experts in road-building, will start early in November on its trip of about eight weeks. Already it has been arranged to make stops at Raleigh and Asheville, N. C.; Columbia and Greenville, S. C.; Atlanta, Ga.; Birmingham, Montgomery and Mobile, Ala., and Chattanooga and Knoxville, Tenn., while many requests have been received that stops be made at other points. The arrival of the train at these places will be the signal for the gathering of conventions, whose members will be given practical demonstrations in the building of various kinds of roads, and it is hoped by the undertakers of the plan to leave behind them well-organized good-road associations to put into effect the lessons taught by the Good Roads Special.

One of the South's greatest needs is good roads. Without them, as in other parts of the country, the expenses of farming are made greater, the lighter loads on bad roads increasing the number of trips to the depot or the town, and consequently causing a loss of time and a waste of money, and in some sections the transportation of products to market is practically impossible at certain seasons. On the other hand, wherever there has been a successful movement for the improvement of highways, the results have been most satisfactory, and the investments in the form of labor or taxation have been more than repaid. Road improvement increases the value of farm lands, first, by making them more convenient to market, and second, by increasing the facilities for communication, and thereby overcoming the drawbacks of isolation, which are responsible in no small degree for the movement in recent years of a large population from the country to the cities.

The interest of the railroads in good highways is well explained by President W. H. Moore of the National Good Roads Association. He says that at present shipments practically are suspended for four or five months in the year in a large part of the country because farmers cannot reach the railroad stations. The desire of the railroads to have enough cars to meet the business of the farmers therefore compels them to carry for different periods idle cars, if they do not wish to face a shortage when the rush of business comes. With good roads the business is distributed more evenly through the year, to the advantage of both the shipper and the carrier. Mr. Moore's estimate is that 90 per cent. of all the products of the soil, valued annually at more than \$3,000,000,000, must first be carried over a common road before it reaches a railroad train or a steamboat. It is easy to understand what a great loss comes to the farmers of the country who are obliged to use bad roads in the primary handling of so much traffic. But Mr. Moore goes still farther and suggests that a regularity in the movement of produce to market would tend to give the farmers control of the market, instead of speculators in the great cities, who are in a position to understand thoroughly how the farmer is hampered by ruts and mud-holes.

Practical points of this kind will be made at the conventions assembled to meet the Southern Railway's Good Roads Special, and it is incumbent upon every progressive Southerner and upon every man who hopes to be progressive to make it a point to meet that train wherever it stops convenient to his home. It is a matter, too, which should be given personal attention by the officials of States, counties, cities and towns along the Southern Railway. The people of the South are awakening to the fact that mere party politics, the contest of office-seekers, is a wasteful game, and they are becoming aroused to the necessity for the

advancement of practical interests through politics, national and local. It will not be long before candidates for office will have to go on record as to their attitude toward the improvement of country roads, and will be held responsible for the methods employed for the betterment of the farmer's condition. The movement in this direction will certainly be hastened by this great trip of the Good Roads Special, and the South will have another reason for congratulating itself upon its enjoyment of the results of the enlightened, progressive policy which is illustrated in this undertaking, and which is giving the South its share of the consequent prosperity.

Petroleum Developments.

An exceedingly valuable publication of the United States Geological Survey, which is bound to be in great special demand because of the recent remarkable petroleum developments in the South, is a report by F. H. Oliphant on the production of petroleum in 1900. This report takes a wide range, embracing the developments in foreign countries as well as in the United States. The special features of the year noted by Mr. Oliphant were a production of crude petroleum greater than that of any year previous, the large increase in production in West Virginia, California, Ohio, Indiana and Texas, 91½ per cent. of the total production coming from the Appalachian and Lima-Indiana fields, an increase in the average price and value of petroleum at the wells, an increase in the number of wells drilled, an increase in the stocks in the Lima-Indiana and Appalachian fields and an increase in the quantity and value of exports of petroleum and its products.

Of the total production in the country, 63,362,704 barrels, the Appalachian field, extending from Wellsville, N. Y., through Western Pennsylvania into West Virginia, Kentucky, Tennessee, Northern Alabama and Southeastern Ohio, supplied more than 50 per cent., or 36,233,174 barrels, and of these West Virginia alone supplied 16,195,675 barrels. Of the total gain of 3,183,098 barrels in this field over the production of 1899, West Virginia supplied 2,285,045 barrels, or a little more than 70 per cent. West Virginia, in fact, was in many respects the banner State in petroleum production in 1900. It produced more petroleum by 1,677,966 barrels than the combined production of Pennsylvania and New York, and its output was 45 per cent. of the entire Appalachian output, as compared with 42 per cent. in 1899.

Mr. Oliphant presents some figures illustrating the development of the petroleum industry since the discovery at Oil Creek in 1859. He says that the total production since that time has amounted to 1,006,876,313 barrels, or, allowing 5.6 cubic feet to one barrel of oil, 5,638,507,352 cubic feet, which would fill a tank with a base of one square mile to a height of 202 feet, or,

if placed in 33,560 tanks of 30,000 barrels capacity, these tanks placed in a straight line would extend 572 miles. Of this immense output Pennsylvania has produced 60 per cent., Ohio 24 per cent., West Virginia 10.3 per cent., Indiana 3.2 per cent., California 1.8 per cent., and all the other producing States less than 1 per cent. The output in the extension of the Appalachian field into Kentucky, Tennessee and Alabama has not been included in the total for that field mentioned above, but there was an output of more than 30,000 barrels in Tennessee and Kentucky in 1900, the construction of a pipe line to railroad connections giving an impetus to production, and during the year quite a number of wells were sunk which will undoubtedly have a marked influence upon the total production of 1901.

The developments in the Tennessee-Kentucky region are a part of the general movement which shows the northeastern sections of the Appalachian field steadily declining in production and the southwestern sections constantly supplying a greater proportion of the total production. Texas, which during the past five years has occupied a place of comparatively minor importance as a petroleum producer, though its output, principally in the Corsicana field, increased from 1450 barrels in 1896 to 836,039 barrels in 1900, has manifested since the close of the year covered by the report an ability to lead the country in the production of petroleum. This demonstration, almost revolutionary in its character at Beaumont, beginning on January 10 last, is deemed of so much importance that a brief account of it is given in the report of production for 1900. The oil from this field, which it has already been proved extends into Louisiana, is generally recognized as being best adaptable to fuel purposes. On this point Mr. Oliphant says that the presence of a large amount of sulphur in this petroleum may seriously affect the lighter distillation products obtainable from the crude, but that it will probably not act corrosively on the sheets or flues of a boiler, especially where steam is used to spray it. He adds:

This petroleum is well fitted for fuel purposes. It is situated far from any large deposit of coal, and is within twenty miles of a deep-water harbor on a coast that is destitute of fuel. These give additional value to this most remarkable deposit.

With West Virginia, Kentucky and Tennessee supplying a steadily-increasing amount of petroleum best suited for illuminating purposes, and with Texas and Louisiana, and possibly Alabama, destined to produce the controlling amount of fuel petroleum, the prospects of the South as a great industrial region with an unsurpassed abundance of fuel of every kind are most encouraging.

The value of clay products in the United States in 1900 was \$96,212,345. To this total the South contributed \$13,926,602, as follows: Alabama, \$712,727; Arkansas, \$381,012; District

of Columbia, \$288,933; Florida, \$140,604; Georgia, \$1,193,218; Kentucky, \$1,481,324; Louisiana, \$507,694; Maryland, \$1,711,856; Mississippi, \$573,368; North Carolina, \$815,975; South Carolina, \$711,336; Tennessee, \$915,578; Texas, \$1,171,017; Virginia, \$1,305,195; West Virginia, \$2,016,765. These figures, in connection with the activity during the past year in building operations in the South, indicate that that section is hardly realizing its great potentiality in the direction of brick-making and other utilization of its resources of clays.

Canadian Iron.

Referring to the fact that shipments of Canadian iron have been made from Sydney to Boston and to Hoboken, the London Iron and Coal Trades Review says:

These shipments, it seems, were so satisfactory that they are likely to be followed by others. This sale of Canadian iron at United States ports is the more remarkable because of the high duty imposed on iron entering that country. If Canadian iron can, despite this duty, be laid down at United States ports in competition with Pittsburg and Eastern Pennsylvania iron, there seems to be a good reason for believing that Canada should have a considerable advantage in her own and in European markets over the United States, which has been commonly regarded as the coming giant in the iron and steel business of the world.

The ability of Canadian iron to compete with that of the United States at the seaboard in spite of the tariff is primarily due to the liberal bounties enjoyed by the Canadian producer. But the question naturally arises, if, in spite of the existing tariff, Canadian iron may compete with United States iron, what will be the effect upon American iron producers of the reduction or abolition of the tariff on certain iron products demanded in some quarters? If we should reduce our tariff on iron while Canada continues her heavy bounty on Canadian-made iron, the sword would cut both ways against American iron-makers.

Southern Coal Production.

Statistics collected by the United States Geological Survey of the production of coal in the United States in 1900 show that the South was an important factor in maintaining the lead of this country as a coal-producer over Great Britain. The progress made by the South in one year in comparison with the rest of the country appears in the following figures of the production in short tons in 1890 and 1900:

State.	1890. Tons.	1900. Tons.
Alabama.....	7,593,416	8,394,275
Arkansas.....	847,554	1,447,945
Georgia and N. Carolina.....	260,007	333,291
Kentucky.....	4,607,255	5,328,964
Maryland.....	4,907,396	4,024,688
Tennessee.....	3,330,659	3,708,562
Texas.....	883,832	968,273
Virginia.....	2,105,791	2,393,754
West Virginia.....	19,252,995	22,647,207
Total South.....	43,684,995	49,247,059
Total United States.....	253,739,992	269,881,827

These figures show that the production in the South increased 5,562,154 tons, or 12 per cent., while that in the rest of the country increased 10,579,681 tons, or 5 per cent., the increase in the South being more than 35 per cent. of the total increase in the country. Pennsylvania still ranks first of the States in coal production, with Illinois second, West Virginia third, Ohio fourth and Alabama fifth.

The value of the exports of domestic products from the United States in the nine months ending with September, 1901, was \$1,024,695,181, an increase over the same period in 1900 of \$11,948,157. Of the exports, breadstuffs

show an increase from \$174,530,148 to \$213,203,084, equal to \$38,762,936. The great bulk of this increase was at six Southern ports—Baltimore, \$10,462,916; Newport News, \$1,854,109; Norfolk, \$445,760; Galveston, \$3,757,983; Mobile, \$498,075, and New Orleans, \$10,098,516, a total of \$27,117,359. There were decreases at Philadelphia, San Francisco and Chicago, while the greatest increase among the ports outside the South was \$6,441,161 at Boston, the increase at New York amounting to only \$1,262,812.

A Great Work.

(Macon (Ga.) News.)

The Manufacturers' Record will celebrate its twentieth anniversary by issuing a handsome special edition within the next few weeks, and if the special edition is valuable in proportion to the regular editions of that splendid publication it will be the greatest edition of a trade paper ever issued in this country.

The Manufacturers' Record was established nearly twenty years ago. In the initial number the announcement was made that the Manufacturers' Record had been established to aid the material development of the South. This announcement was one of the most truthful ever made. How well the Manufacturers' Record has fulfilled its mission is evinced by the fact that it is today the most widely read trade publication issued in America. The varied virtues of the South have been given to the financial readers in this country and in England in every issue of the Manufacturers' Record for nearly twenty years. Its pages are filled with advertising representing the leading commercial institutions in this and many foreign countries.

Mr. Richard H. Edmonds is a true friend to the South, and his talent, combined with the talent of a strong editorial staff, presented through the columns of the Manufacturers' Record, has done a great work for the South.

The News awaits with interest the twentieth anniversary edition of the Manufacturers' Record.

To Make Woodworking Machines.

Arrangements have been completed for the establishment at Thomasville, N. C., of an industry important to the woodworking interests of that section. The industry will be a branch factory of Messrs. L. G. McKnight & Co. of Gardner, Mass., manufacturers of machinery for making chairs, school furniture, general furniture and cabinets. About \$6000 worth of machinery is being installed, and a number of skilled workmen will be sent from Massachusetts to operate the branch works. The branch will be enabled not only to make new machinery, but also to repair and keep in proper condition McKnight machinery used in Carolina woodworking factories. The castings used will be shipped from Gardner and set up at Thomasville.

Cotton Mill Wanted.

Mr. A. D. Childress, secretary of the Beaumont Oil Exchange and Board of Trade, writes to the Manufacturers' Record as follows:

"Beaumont, with her phenomenal oil field and a population of 20,000, having cheapest fuel in the world, located on Neches river and near seaboard, and in the heart of the cotton-growing section of Texas and Louisiana, wants a cotton mill. Correspondence is invited with a practical, experienced cotton-mill manager who can invest some money to identify himself with the enterprise in its active management. Unlimited local capital is here for investment."

PROGRESS AT SOUTHERN PORTS. IV--BRUNSWICK.

By William S. Irvine, Editor Glynn County Picket.

[Written for the Manufacturers' Record.]

Within the past ten years the port of Brunswick, Ga., has steadily grown into prominence and importance with such proportions as to be now established as one of the vital ports of the great southeastern division of the United States, and on the South Atlantic seaboard. With unusual natural harbor advantages, nearby territory, magnificent railroad connections penetrating the commercial, agricultural and industrial centers of a rapidly-developing territory of the South Atlantic coast and the Middle West, and excellent facilities for receiving and discharging shipments, Brunswick has increased her port business over 400 per cent. in the past eight years. She enjoys an immense coastwise trade in addition to her foreign trade. She is now building a new railroad, which is a shorter route than the existing lines through the best timber and naval-store section of Georgia, through the undeveloped and partly developed agricultural section of both Georgia and Alabama, through the most wealthy mineral section of Alabama up to Birmingham. This route will also penetrate the belt of the leading cotton manufactories of all classes, as well as various other manufactories. The road is being built as rapidly as money and men can perform their respective work. The officials state that by the first of January it will be on the Alabama line. The Brunswick & Birmingham Railroad, as it called, will, it is estimated, put the bulk of both raw and manufactured cotton of Georgia fifty miles nearer deep tidewater than they are now; it will put the main belt of the celebrated Southern pine timber and various other timber over forty miles nearer deep tidewater; it will put the iron, coal and other minerals of North Alabama and all the manufactured output of the Birmingham district over sixty miles nearer deep tidewater.

Brunswick is now entered by four railroads, three of which are the great systems of the South—the Southern Railway, the Plant System and the Seaboard Air Line Railway, the fourth one being the new road, the Brunswick & Birmingham. In addition, surveys are now being made for a new railroad to be built from the Okefinokee swamp and timber lands, fifty miles from Brunswick. From the Okefinokee the intention is to build through the Florida timber lands and phosphate section on to Tampa.

Brunswick has two coastwise steamship lines—the Mallory to New York, and the Clyde to Boston—both carrying freight and passengers, with weekly sailings. The foreign steamship line is operated by Messrs. Strachan & Co. between Brunswick and the principal European ports.

In addition to these are regular chartered sailing vessels engaged in both coastwise and foreign carrying trade. Brunswick also enjoys a large inland river trade, having steamers to St. Simon Island, Darien, Jekyll Island, Cumberland, Fernandina, Satilla river landings and Altamaha river landings. The volume of these several carriers is large and varied, and makes an aggregate footing up into millions of dollars, estimated this year at \$52,000,000.

The value of exports for the past eight years, as reported by the books of the United States custom office and the Board of Trade, is:

Year ending December 31.	Foreign.	Domestic.	Total.
1893.....	\$2,871,585	\$2,555,562	\$5,427,147
1894.....	5,245,393	3,628,508	8,873,901
1895.....	4,464,105	3,876,039	8,340,144
1896.....	5,728,784	4,985,322	10,714,106
1897.....	7,901,202	3,787,457	11,688,659
1898.....	11,089,355	3,352,433	14,441,788

1899.....	6,416,705	5,963,704	12,380,409
1900.....	6,685,273	8,454,394	15,139,667

During the same period the entire volume of business carried on through the port was as follows:

Year ending December 31.	Total exports and imports.	Tonnage.
1893.....	\$5,960,000	269,012
1894.....	9,940,000	329,596
1895.....	12,680,000	319,882
1896.....	15,675,000	370,362
1897.....	17,500,000	419,581
1898.....	21,409,738	406,018
1899.....	21,375,486	465,664
1900.....	24,714,538	497,815

The miscellaneous foreign shipments for the year 1900 were as follows:

Bales of cotton.....	89,565
Bales of linton.....	156
Tons of cottonseed meal.....	597
Barrels of rosin.....	174,391
Barrels of turpentine.....	53,979
Lumber, feet.....	25,286,000
Various timber, in feet.....	11,484
Shingles, pieces.....	917,800
Railroad ties, pieces.....	50,441
Tons of pig-iron.....	11,790
Lathe, pieces.....	20,400
Tons of cottonseed.....	4,022
Tons of cottonseed cakes.....	608
Bales of hay.....	20
Tons of phosphate.....	9,040
Staves, pieces.....	2,400

To accommodate this increasing volume of business the railroads have had to extend their wharves and docks. The Plant System alone is now finishing its new terminals, which from beginning to end represent an expenditure of about \$1,000,000. The Southern Railroad has excellent terminals; these also have been increased. The Brunswick & Birmingham Railroad is now completing the details for its immense terminals on Back river. They will consist of three large slips 300x2500 feet each, and equipped with every modern appliance needful in their business. From the terminals to open ocean, a distance of about six miles, vessels can load and put to sea drawing twenty-five and one-half feet of water on average high tide. If the depth over the ocean bar is increased to thirty feet, vessels can load to twenty-eight feet there, as the river is deep enough. The Seaboard Air Line will also use these terminals.

The harbor of Brunswick is naturally deep, spacious, safe and well adapted for all kinds of shipping. Captain Gillette, who has charge of the United States government work in harbors and rivers of this district, states that the harbor is naturally one of twenty-six feet depth, and that the few places not now having that depth can be easily dredged by but a nominal cost, and for that purpose has recommended the building of a large dredge, which will be stationed here, to be used for the improvement of the harbor and the bar channel. It is highly probable that a 30-foot channel from the ocean bar to the docks will be dredged in the near future, as really the harbor, with but few exceptions, is practically of 30-foot depth now at high tides. Inasmuch as the bar channel years ago was thirty-two feet, it is reasonable to believe that it can be restored. It shoaled up to eighteen feet on account of wrecks, but was blown out by dynamite a few years ago by Col. Charles Goodyear to a depth of twenty-five and one-half feet, and remains at that depth. This reveals the future as to deep-water facilities.

In the census of 1880 Brunswick had less than 3000 inhabitants; in 1890 it had grown to 8459. This increase came during the boom days of 1888-91; the boom and inflation fell through in 1893, the year of national panic, and Brunswick, like many other places in similar condition, suffered a large loss of population and valuation. But in 1895 real estate and all values reached a proper level, and since that time the actual increase in valuation and growth has been legitimate,

based upon the fundamental advantages of its location, with its commercial and industrial upbuilding. The recent census of 1900 shows a population of 9081. Hundreds of new buildings have been erected, among which are elegant residences, substantial stores and warehouses, to keep pace with the natural growth. Among the new and prominent buildings on which work will begin within the next sixty days is the United States custom-house and postoffice. It will cost \$100,000.

The new city administration has placed the finances of the city in excellent condition. The city bonded debt was made in 1894 for the purpose of putting in a system of sanitary sewerage and surface drainage. The interest payments have been met promptly. The sewerage system so purchased was put in by the late Colonel Waring. It is used as a model system by the United States government.

The banking capital of the city amounts to \$190,000, and is controlled by two banks, one of which is a national bank. Both are in excellent condition, and do a large business. There is one local building and loan association, which has greatly stimulated the building movement and encouraged thrift.

New enterprises receive kind and liberal treatment, as well as co-operation.

The city is supplied by a system of water-works, whose source of supply comes from artesian wells. Gas and electricity are both used for lighting purposes.

Brunswick has a magnificent back country only partly developed. The land is rich, the climate is healthy, and the two will grow almost every variety of Florida garden truck, as well as the big field crops of Georgia, and locations are cheap. This territory in the past ten years has increased over 60 per cent. in population and 100 per cent. in valuation, and it is hardly touched. In area it is equal to the State of Maryland, but with only one-tenth of its population. This reveals the prospective commercial predominance of Brunswick as a distributing point.

The city's net tax valuation of personal and real estate for this year amount to \$5,070,849, upon which there is a tax rate of \$14 on the \$1000. The county tax rate is \$8.31 on the \$1000.

As a resort Brunswick is the center of tourist travel in the winter, as it is within five miles of Jekyll Island, the famous winter home of the Jekyll Island Club, whose membership comprises the wealthiest aggregation in the world. A few miles further is Cumberland Island, with the winter homes of the several Carnegie families. Brunswick, being situated midway between Savannah and Jacksonville, gets a good share of the Florida tourist travel. In summer the islands of St. Simon and Cumberland are the Mecca of the summer seaside seeker.

One of the strongest developers of Brunswick's natural advantages and advantages of her territory has been her energetic Board of Trade. This organization has been a power for prosperity throughout South Georgia. Under its auspices conventions have been held, whereby the material wealth of the entire section and city have been advertised and the people awakened to better possibilities. In this year alone they organized the Brunswick & Birmingham Railroad Convention, which drew 300 business men from Georgia and Alabama together to discuss the building of the Brunswick & Birmingham Railroad. Later on the National Maritime Congress was held, which attracted national interest, and out of which was organized a shipbuilding company. Then in the spring a convention was held for the purpose of encouraging the cultivation of cassava in this

section for stock food and as a product for the manufacture of starch, and to further increase the cultivation of sugarcane; as a result a syrup and sugar refinery company was organized. And on October 22 they will hold another similar convention. And there are other conventions in view for the industrial upbuilding of this section.

TO COST \$3,000,000.

Plans for Another Steel Mill in the Birmingham District.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., October 15.

We had with us last week a delegation of the most prominent officials of the Republic Iron & Steel Co., headed by its president. They were met here by Julian Kennedy of Pittsburg, the noted expert and builder of steel plants. The object of the visit was to inspect their holdings, and, conditions being favorable, to locate the site of a large steel mill. This was done, and when the party left here Mr. Kennedy went to Pittsburg to prepare plans for the mill. There will not only be a steel mill erected, but necessary adjuncts to convert the mill's output into the various forms of commercial steel. It was estimated that this new addition to our industries would represent an investment of at least \$3,000,000. Just as soon as the board of directors formally authorize them, operations will begin. The mill and its adjuncts are sure acquisitions.

A very important deed in real estate was filed this morning, by which two squares extending from Sixteenth to Eighteenth streets and from Powel avenue to Avenue A, was transferred to a New Jersey corporation having railroad connections. It can mean only one thing, and that is, it is intended for terminal facilities for some railroad. The consideration was \$100,000. The Mobile & Ohio Railroad is extending its mineral branch to Ensley City, which is practically extending it to this city, for once there, it can arrange to get here. It has so done. Railroads traversing the mineral belt are placing extensions and building spur tracks to opening mines, thus increasing facilities for business when they can't promptly care for what is offering now.

It is gratifying to learn that after a long and wearisome siege, the Alabama Consolidated Coal & Iron Co. has at last obtained possession of its Mary Lee coal mines. At the Mary Pratt furnace iron ought to be made at a minimum cost, for it is situated within sight of the ore that will feed the furnace and within a stone's throw of the coke that will furnish the fuel. There is no furnace in the district more favorably situated as to raw material.

Some industrial and development companies of varying capital have been formed, and some important coal mines in Tuscaloosa county will soon be opened. All the space in the large office building to be erected has been taken, and an option secured on another prominent corner for a similar purpose.

The general advance predicted for iron last week did not mature. But there were individual cases where some stiffening prevailed because of scarcity of certain grades of certain make. But the market, as a rule, kept on an even keel at figures prevalent the preceding week. The buying was very good, and several lots varying from 5000 to 1000 tons were taken. The market is in prime shape for an advance, and it is simply a question of policy to ask it. The following facts show clearly existing conditions, viz.: One interest declines all new business for 1901 for Nos. 1 and 2 soft and for Nos. 1, 2 and 3 foundry, having sold for that period its full output. Another interest has sold

for the same period its full output of gray forge and No. 4 foundry, and has only a limited supply of foundry grades to market. Still another says: "We could fill some limited orders for December, but could not care for any new business this side of December." A fourth interest says: "Our yards have not been so bare of stock as they are now since 1895. We have only 'odds and ends' left." A fifth interest says: "We had a very fair stock when the late demand set in, and we have rather freely fed it out, until we are reduced to what we usually carry for our current order trade. We are not seeking new business for 1901 delivery." Now here are represented the condition of five large interests, all showing a healthy condition of affairs. It is not intended to create the impression that there is no iron here, but to show that the great bulk of the stock is placed, and that the furnaces are in a more independent position as to business than they have been for a long time.

Sales now for 1902 covering the first quarter are becoming common, and quite a number of orders covering April and May have been placed. As an instance of the activity that has prevailed in the market, one interest placed 52,000 tons in September, an amount greatly exceeding their output. Such sales make one "haul in their horns" later on. The market is hardening, though so far quotations are unchanged. Stocks diminished about 4000 tons in September, and will decrease this month still further, depending altogether upon facilities offered shippers to move the iron.

J. M. K.

The Pig-Iron Market.

In their weekly report Matthew Addy & Co. of Cincinnati say:

"The favorable statistical situation in pig-iron is reflected in the actual business that is being done. As a matter of statistics, there is on hand today in furnace-yards enough iron to keep consumers running just one week. Consumers themselves nowhere have any stocks on hand worth mentioning. In many cases they are literally running from hand to mouth, so that any trifling interruptions in shipments or delay in transit causes them serious inconvenience. We have had during the last two months innumerable instances of this. In fact, on many occasions foundries have shut down three and four days at a time.

"Business continues very much the same as at last report; that is, there is a continuous heavy buying of all kinds of iron. The largest single transaction during the past week was the purchase of 15,000 tons of Southern iron by one of the largest combinations. There were a few thousand ton orders, but the great volume of the new business has been in smaller lots. From 100 to 500 tons has been the rule. Deliveries are mainly for shipment through the first half of next year, although there is still a scattering trade for shipment this year. As a matter of fact, however, there is not a great deal of iron obtainable for this year's shipment. Both North and South there is a shortage for immediate shipments of higher grades of foundry metal. The free bookings of orders for the first six months of 1902, of course, have assured the ironmasters of the future. Their situation in this respect has greatly changed since September 1. The future then was a hope, whereas now it is a practical certainty.

The present week has opened briskly, and there is no question at all but that it will continue as it begun."

Reviving Idle Furnaces.

The mining and furnace property of the Runyon-Hillman Company, that has been lying idle near Paducah, Ky., for many

years, will be put in complete operation again. The parties who have been making the arrangements to this end have filed articles of incorporation at St. Louis, Mo., under the title of the Hillman Land & Iron Co., with capital stock placed at \$1,000,000. Within thirty days the blast furnaces are to be again in operation, manufacturing about 200 tons of pig-iron daily, and this output is to be doubled soon after the product commences to be marketed. Coke ovens will also be constructed. The mines include 70,000 acres of iron-ore lands. The company's officers are: John W. Harrison, president; E. H. Simmons, vice-president and treasurer; E. H. Simmons, manager, and Thomas J. Scott, practical operator; they are all of St. Louis.

SPINDLE TOP'S PRODUCT.

Oil Operators Seeking to Market It Profitably.

[Special Cor. Manufacturers' Record.]
Beaumont, Texas, October 14.

The principal efforts of the oil operators at the present time are being directed toward the profitable sale of the product of Spindle Top Hill. The particular direction which these efforts are taking is to eliminate the small operator from being a disturbing factor in the field. There are quite a number of small concerns that have a gusher, but whose entire capital was consumed in obtaining the well, and who are not able to erect tankage, buy tank cars, build necessary pipe lines and loading wracks. Naturally, these small companies have been endeavoring to dispose of their oil at the well to large consumers, allowing the latter to take care of it after its ejection from the well, and in this manner have made some exceedingly low prices, much lower, in fact, than the larger companies could meet after considering their facilities for taking care of and delivering the oil. There is now strong reason to believe that a movement is on foot to in some manner buy a certain portion if not all of the product of the smaller companies, so that the latter may be enabled to make returns upon their stock without the necessity of their slaughtering prices. In this manner it is proposed to get a reasonable price for the oil. The details of this scheme have not been perfected as yet, hence further information cannot be furnished at this time. One of the chief obstacles in this effort, of course, is the anti-trust law of the State, which prevents the formation of the smaller companies into one big combination, which would be the most sensible way out of the difficulty, as by combining their wells and resources they would be enabled to purchase the needed facilities for marketing their product.

The shipments of oil at the present time are quite satisfactory under the circumstances. The monthly shipments by water and rail will nearly reach 400,000 barrels. One factor that may increase the water shipments is the ability of the smaller companies now to get their oil to the seaboard without having to own their own pipe line. The National Oil & Pipe Line Co. has just completed its pipe line from the wells to Port Arthur. It announces that while it is not a common carrier, it will for the time being act as such, and offers to transport oil from the field to Port Arthur at reasonable rates for anyone desiring its services. This undoubtedly is a great convenience to the smaller companies, and enables them to figure on shipments by water. The National itself is doing a large export business, having just completed the loading of the tank steamer Atlas, tank barge No. 81 and a sailing vessel with oil to be shipped to Northern point. The sailing vessel Matanzas goes to the Union Petroleum Co. of Philadelphia. The others go

to the Bayonne refineries of the Standard Oil Co. The National alone has contracts for several hundred thousand barrels additional to go by water. So far the National has not done much in the way of seeking domestic business, but it is understood now that it has ordered tank cars to enable it to operate in this business, and further, it is building loading racks, whereby it can load twenty cars at once. Its tankage facilities are excellent, having storage for 170,000 barrels completed, and contracts out for 150,000 barrels more. It has also several exclusive European agents looking out for its interests in the foreign markets on the Continent and in Great Britain. This company promises to be one of the foremost institutions in the development of the local oil field.

The past week has not seen many new wells brought in, two being the total number that have come to life during the week. These are the Manhattan No. 2 and the Gladys Oil Co. No. 1, both of which are good wells, and run the total number to about seventy. There are four or five wells that are expected to come in next week. Gradually the development of oil wells on the Hill is ceasing, and the efforts to perfect sales departments are increasing. It is recognized now that there is ample oil available for several years to come, and the most urgent question now is to perfect means for satisfactorily marketing what has already been found. There is little change in the quotations on the stocks of the various oil companies. They seem to remain about the same figures. There will hardly be any marked changes until some dividends are declared, but already there is talk of two or three of the companies declaring a dividend along in January, which, if done, will undoubtedly have a very salutary effect on stocks.

There are interesting developments expected from the Big Hill territory, just southwest of Beaumont. Several parties have secured specimens of the rock which has come out of the Guffey well at that place, and in the opinion of the oil experts it is as good oil-bearing sand as is found in Spindle Top Hill. It is the opinion of many that a well can be brought in in that neighborhood at any time the Guffey people elect.

BOILERS LITTLE AFFECTED.

Deterioration from the Use of Fuel Oil Not Extensive.

An inquiry having been made as to whether the Texas oil was injurious to boilers, one of the leading companies of Beaumont, in a letter covering this point, says:

"Bearing upon our conversation relative to what effect the sulphur contained in the Beaumont oil may have on the boilers, we wish to say that from all accounts now before us no complaint has been made by any of the chemists that have been in the employ of the fuel-oil consumers. While their tests slightly vary, none of them claim a higher percentage of sulphur in the Beaumont oil than 2.38. So small a quantity cannot possibly result in an appreciable deterioration of the boilers, and it will take many a year before such damage can be demonstrated, if ever. Boilers are generally built to last from ten to fourteen years, and even should the sulphur cause them to show defects a little earlier than what they would show burning coal, such a slight difference is amply made up for by the enormous economy through burning oil. The fact is that the many boilers on the Beaumont oil field in use from January up to this time, provided with the most primitive equipments and handled in a

most reckless manner, do not indicate the slightest deterioration.

"It is true that some chemists, for purposes of their own, would claim that the amount of sulphur in the oil is large, but we have news from Europe, whose chemists ought to be equal to any in this country, who pronounce that the oil may be burned without any fear whatever as concerns its effects upon the boilers.

"As far as the smell of the oil is concerned, it would, of course, be folly to deny that the crude petroleum of Beaumont has a rank petroleum smell, but what of that! The oil is not exposed to the air, as the tanks are closed, and anyone standing before a furnace in which oil is burned will cheerfully testify that no odor whatsoever is noticeable.

"There are thousands of industrials in Texas now where the oil is burned daily, and from which not a single complaint has come as to anything objectionable in this or any other feature involved in the fuel-oil operations.

"In addition we would state that another favorable feature in burning oil is that its fuel contents are regular, and do not cause that variation of steam-making power so objectionable in coal."

COAL PRODUCED IN 1900.

The South's Share in the Output of the United States.

The statistics presented in a report by Mr. Edward W. Parker for the United States Geological Survey on the production of coal in the United States in 1900 show that in the last year of the nineteenth century the United States as a coal producer exceeded all its previous records.

"In 1899," says Mr. Parker, "the production of coal in the United States exceeded for the first time that of Great Britain, and in 1900, with an increased output of 16,141,845 short tons over the preceding year, the lead over the output of Great Britain was almost exactly doubled, Great Britain's production in 1900 being about equal to that of the United States in 1899. Next to this most interesting feature connected with the production in 1900 was the marked increase in value as compared with the increase in tonnage. The amount produced in 1900 showed an increase over the preceding year of a little more than 6 per cent., the average price realized during 1900 being the highest since 1893. With the exception of the strike which occurred in the anthracite region of Pennsylvania in the summer and fall of last year, and one in the Cumberland region of Maryland during the summer, the coal-mining industry was comparatively free from labor troubles throughout 1900. The effect of these two strikes is exhibited in the decreased production of 2,723,294 long tons of anthracite coal and of about 700,000 long tons in Maryland's production. There has been a notable increase in the percentage of American coal exported to foreign countries, but the amount is still small as compared with the production, being equivalent to less than 4 per cent. of the total output."

The figures compiled by Mr. Parker show that while the largest increase of bituminous coal in 1900 was in the output of Pennsylvania, being equal to 5,692,151 tons more than that of 1899, it was partly offset by a decrease of 3,050,000 tons of anthracite, so that West Virginia's increase of 3,394,212 tons was the largest net increase in any State. Next to West Virginia comes Ohio, closely followed by Illinois. There were decreases in but three States, Idaho, Maryland and Oregon, and in one of these, Maryland, the decreased product was accompanied by an increase in value, so that the opera-

tors in that State have no reason to complain of the business for the year. It is interesting to observe in almost every case that there was an increase in value in considerably larger proportion than the increase in product. The three exceptions to this were in Arkansas, New Mexico and Utah, where there was a slight decline in the average price per ton. Arkansas enjoys the distinction of the largest percentage of increase, with 75 per cent. gain over 1899 in the amount of the product and 66.6 per cent. gain in the value. This increase was principally due to the restricted production in 1899, which was brought about by the prolonged strikes in that region during the year. Utah is credited with a gain of 45.9 per cent. in product and of 45 per cent. in value. Michigan gained 36 per cent. in product and 44 per cent. in value. Georgia increased 35 per cent. in amount and 54 per cent. in value. One of the most remarkable instances was the increase of 52.8 per cent. in the value of West Virginia's product, as compared with an increase of 17.6 per cent. in its output, and in that of Virginia, which gained 13.7 per cent. in tonnage and 62.8 per cent. in value.

A striking feature of the progress of American coal mining during the past few years has been the rapid development of the use of under-cutting machines for the mining of bituminous coal. This has reached such proportions as to make it advisable for some of the countries of Europe to send representatives to this country to study various methods employed. On this point Mr. Parker says:

"The statistics for 1900 show that about one-fourth of the total amount of bituminous coal mined in this country was undercut by the use of machines. The total production of bituminous coal in the United States showed an increase in 1900 over 1899 of 18,263,674 short tons, or less than 10 per cent. The machine-mined product increased from 43,963,933 short tons to 52,790,523 short tons, a gain of 8,826,590 short tons, or something over 20 per cent. It will thus be seen that nearly 50 per cent. of the total increase in the output of bituminous coal in 1900 was contributed by mines operating machines.

"Machines were used in twenty-two States and Territories in 1900, the same number as in 1899. Alaska, which reported a machine-mined product in 1896 and 1897, has not reported any coal so mined during the last three years. No commercial product was reported from Alaska in 1900. Texas produced some coal by machines in 1897 and 1898, and Utah had a small machine-mined product in 1896, but conditions in these two States were evidently not adapted to the economical use of mining machines, and no machine-mined tonnage has been reported from them since the years mentioned. The statistics of the use of mining machines in Illinois were obtained from the report of the State bureau of labor statistics. They show that while there was an increase of six in the number of firms using machines in the State, there was a decrease of ten in the number of machines in use and of over 1,000,000 tons in the machine-mined product. The statistics have been, with the exception of Illinois, compiled from the reports of the operators to the geological survey. They show that in 1900 there were 323 firms or corporations in the United States using mining machines, as against 308 in 1899, 280 in 1898 and 208 in 1897. The number of machines actually in use in each year were 1956 in 1897, 2622 in 1898, 3125 in 1899 and 3907 in 1900. The total amount of coal mined by machines in 1900 was 52,790,523 short tons, as compared with 43,963,933 short tons in 1899 and 32,413,144 short tons in 1898.

"Outside of Illinois there were seven other States whose machine-mined product in 1900 was less than in the preceding year, though in only three was the number of machines in use decreased. The record for percentage of increase in the number of machines in use in 1900 was made by West Virginia, the number of machines in this State in 1900 being more than double the number in use in 1899, and the proportion of machine-mined tonnage to the total in this State increased from 9.27 per cent. in 1899 to 15.00 per cent. in 1900."

COAL FOR BRAZIL.

Suggestions of a Great Market for Americans.

United States Consul-General Seeger at Rio de Janeiro reports that he believes that American dealers, by making the proper effort, would have a fair chance to secure the contract for 60,000 tons of hard coal for the Central Railroad, to be delivered during the six months commencing January 1 next, the bids for which will be asked by the Brazilian government, probably, about the end of this month. He says that the consumption of American coal in Brazil during the last two years has increased very considerably. In a letter to Mr. Seeger, Castello Branco, a well-known merchant of Brazil, points out the opportunities for a trade in American coal at Rio. He says:

"United States coal met with great opposition as soon as it appeared in the Rio de Janeiro market, because it threatened to disturb the Cardiff coal business. It is well known that American coal is cheaper than Cardiff, and consequently there is great opposition on the part of the dealers in the latter, who have declared the American product to be of bad quality. The American coal brought into Brazil is in the hands of importers, who do not put it on the market in competition with Cardiff. No one is interested in making a propaganda for it or in trying to convince the consumer that it is as good as Cardiff. Under these circumstances, if the American mine owners want to get a part of the coal business in Rio de Janeiro they must decide to establish an agency in Rio with the means necessary for the development of the business, viz.: "They must establish a coal depot in Rio for furnishing factories according to their needs.

"They should have a suitable person, who understands the coal business in its minutest details, to place the product with railroads, factories, etc.

"They should have the funds necessary for expenses in Rio.

"If the mine owners of West Virginia wish to extend their business relations, they should, without loss of time, send a considerable quantity of coal of the best quality for the official tests on the Central Railroad of Brazil. They should also quote the lowest prices at which they can deliver the coal at the port of Rio de Janeiro, taking into consideration the fact that their sailing vessels or steamers will have a return cargo to the United States. They should send the funds necessary to enable the agency here to work for the interests of the business, and, finally, they should have absolute confidence that any sums which may become due them for coal supplied will be paid in full.

"All possible efforts should be made toward securing the contract for supplying the Central Railroad, for, once this supply has been accepted and the coal found to meet the expectations of the railroad administration, the American coal business may be said to have become established in Brazil, so strong a hold on public opinion has the approval of this railroad."

Consul-General Seeger notes that the

Royal Mail steamship Nile, bound homeward to Southampton from Buenos Ayres, had bought at Rio about 600 tons of Pocahontas coal. This, Mr. Seeger was informed, was the first time American coal had been taken for consumption by a Royal Mail steamer, a fact which assumed particular significance from the circumstance that the Rio agents of the Royal Mail Company were also the agents for Cardiff coal.

Bituminous Coal Combinations.

The combination of bituminous-coal producers that has been in progress for some months was finally completed last week, when articles of incorporation for the Pocahontas Coal & Coke Co. were filed under New Jersey laws.

The company includes the Flat Top Coal Land Association and a number of other producers of bituminous coal along the Norfolk & Western Railway in Virginia and West Virginia, and it is believed that producers of soft coal in other sections of the country will be absorbed in the future. The lands now controlled include 325 acres of coal properties, with numerous operating mining plants, branch railways, railway equipment, etc.

The capital stock is \$40,000,000, and this share capital will be divided equally between common stock and 6 per cent. non-cumulative preferred stock. There will also be issued \$20,000,000 in bonds, but only \$9,000,000 of this amount will be offered at present. The syndicate managers in forming this combination were Messrs. E. H. Gary, William Edengorn and Isaac Mann, all of New York. Mr. Gary is chairman of the United States Steel Corporation, but it is not as yet known whether there will be any official relation between the corporation and the new company.

The Pocahontas Company last week paid the secretary of state at Charleston \$19,513 in payment of the tax required of corporations owning lands in West Virginia.

Extensive developments of the properties acquired will be made.

A dispatch from Cincinnati states that another soft-coal combination is forming for the purpose of competing with the Pocahontas Coal & Coke Co. of West Virginia, just announced. It is said the new company will comprise leading operators in the New River district of the Chesapeake & Ohio Railway. The Chesapeake & Ohio Coal & Coke Co. is also said to be in the proposition. The project includes plans for chartering coal-carrying steamships for taking the fuel to Mediterranean ports, to be sold in France, Italy and other European countries. American and English banking interests are said to be interested in the proposed combination.

Development in West Virginia.

Another tract of coal land, it is stated, is to be developed in Nicholas county, West Virginia, by Ohio and West Virginia parties. The tract comprises about 4000 acres of land located on what is known as the Bell Fork, and forty miles from Charleston. Among those who have taken an interest in the development are W. J. and Sylvanus Jones of Readville, Ohio, and William Campbell of Charleston, W. Va. It is possible that an additional tract of 6000 acres in the vicinity will be opened at the same time. The company proposes building a railroad to connect the mining property with the Chesapeake & Ohio system.

The sales in the Joplin (Mo.) district during the week ended October 12 were 9,051,550 pounds of zinc ore and 1,386,250 pounds of lead ore, valued in all at \$141,433.

SOUTHERN SECURITIES ABROAD

Vice-President Middendorf of the Seaboard Air Line Tells of His Observations in Europe.

Mr. J. W. Middendorf, a leading banker of Baltimore, and vice-president of the Seaboard Air Line, who recently returned from Europe, in an interview with the Manufacturers' Record said:

"As the result of my observation I have returned to the United States with my opinion confirmed that this country has a great future before it. One has to observe the foreign methods to appreciate the progress we have made in manufacturing and how far we have gone ahead of the people on the other side in business methods generally. Our economical and labor-saving processes have enabled us to extend our market so greatly. The feeling towards American securities is one of rapidly-growing confidence, notwithstanding the setback which the United States received during the period of railroad and other receiverships a few years ago. I believe that the era of distrust among British and foreign capitalists as regards American investments has almost entirely passed away, and that the United States in their estimation offers a more favorable field than even Australia or South Africa, for example—their own possessions. London markets have undergone a great depression, principally on account of the troubles of England in South Africa, but money seems steadily accumulating there, and, in my judgment, will sooner or later be attracted by propositions of a substantial character. Southern securities are largely represented in investments held abroad, and, in my opinion, the principal Southern railroads are as favorably regarded from a financial standpoint as any of the larger American systems. The plans of reorganization carried out in the South have been closely followed, and the successful results attained have restored confidence in them. The people on the other side are realizing that American railroads are thoroughly and economically managed.

"A comparison of English and American railway methods is not in favor of the former. The fact is that the English companies have charged such large sums for betterment to capital account as to greatly increase their fixed charges. Modern railroad policy in the United States has been to carry out betterments and improvements, but to pay for them principally from the earnings—to make a road pay for itself. As a result, the capitalization of some of the English lines is much greater in proportion than in the United States, and this is one of the reasons for the unfavorable feeling which is increasing towards their securities.

"I might say here that England is to be a great field for railroad construction—especially electric lines. Messrs. J. G. White & Co., the electrical contractors, formerly of Baltimore, make London their headquarters, and have secured some very important contracts in the English colonies, while the world has literally become their field. A representative of the firm informed me that they had been estimating upon work in Australia, and even South America. They were also estimating on a contract for the construction of important electric railroad lines at Bournemouth, England, which since my return I find they have secured. One great drawback to Great Britain has been the power of labor unions, which have greatly restricted the hours of work and increased the cost of production. For instance, the day's work of a union bricklayer is supposed to be not over 400 bricks, although a skilled workman can probably lay 1500. I heard of no foreign manufacturer who contemplated locating in this

country as a result of American competition, but such a move may be made.

"My presence in England after the death of President McKinley impressed me with the fact that the English feel and are deeply interested in our country, and there can be no question as to their sincere and kindly feeling for us. They were as greatly depressed over the sad event as the people of this country. They recognize the rapid development of this country in a commercial and manufacturing way with a feeling of admiration at the wonderful strides we are making."

Georgia and Florida Sugar.

Editor Manufacturers' Record:

Last June I furnished the Manufacturers' Record some articles on growing sugar-cane in Southern Georgia and Florida, showing the profits therefrom as a staple crop. The letters that poured in from the Northern and Western States furnished the convincing proof that your valuable source of information, the Manufacturers' Record, is read by the people of all sections of the United States. Their inquiries proved most conclusively that they were deeply in earnest about coming South to locate. In several localities they have organized companies and wish to purchase lands. In this connection I again wish to reassure them that as a section of country for comfort and absence of severe atmospheric changes, cheapness of living and land, the sections named hold a pre-eminence over all parts of this continent in their varied advantages in productions. In this assertion I speak impartially, and exclusively for the benefit of those who are looking Southward for homes. As to health and a renewal of youth and vigor, I refer them to those who are here from the North and West, as well as the United States statistics on the subject of health. The progress that this section is making is attracting the attention of the entire country, and yet it is in its infancy as to what it will be in the next decade. The Georgia fair will open at Savannah on the 6th of November, and the Florida State fair on the 19th of November. Much can be learned of Georgia and Florida if the people of the States in the North and West will send gentlemen of close observation and inquiring minds to attend these fairs. I am put on notice that men of means from New York, together with a sugar expert and sugar-machine manufacturer, will be out here during the time of manufacturing the cane juice into syrup. This is a step in the right direction, "for seeing is believing."

JOSEPH TILLMAN.

Quitman, Ga., October 11.

A State Sugar Mill.

The State of Texas will erect a sugar mill to cost from \$150,000 to \$200,000 on the Clemens farm, in Brazoria county. The financial agent of the penitentiary board has been authorized to take the necessary steps for establishing the plant. The products of the State farm are pledged to pay for the mill.

A Salt-Mining Plant.

The directors of the Palestine (Texas) Coal & Mining Co., have officially decided upon the construction of the proposed salt-mining plant that has been under consideration for some weeks. The plant is to have a capacity of 500 barrels per day, but contracts for supplying the required machinery will not be made until the company has secured the services of an efficient salt manufacturer. The development of these salt deposits was brought about by accidental discovery of the brine in the land owned by the company.

Branch of Pittsburg Glass Works.

A branch of the Pittsburg (Pa.) Plate Glass Co. will be established at Atlanta, Ga., and will be the headquarters for that section of country. A building has been leased at 34 S. Pryor street, and an equipment will be installed immediately for the manufacture of mirrors, bevel plates and leaded art glass. A general line of glass, paints and painters' sundries will also be carried in stock. This Pittsburg company is capitalized at \$10,000,000, and has seventeen branch houses throughout the United States. The Atlanta branch will be the first one south of Cincinnati, and R. T. Conley, now of Milwaukee, will be its manager.

Another Rice Mill.

The development of rice-milling in Louisiana continues steadily. The latest new mill to be completed in the State is that of the Iota Rice Milling Co. at Iota, in Acadia parish. This plant made its initial run last week. Its capacity is 1200 barrels of rice per twenty-four hours, the equipment of machinery being installed in a building three stories high, 44x50 feet; the rough warehouse is two stories high, 125x162 feet, while the clean warehouse is 82x125 feet in size. The quality and quantity of rice produced in the Iota district promise a successful existence for the new plant.

Quicksilver in Texas.

The Kansas City, Mexico & Orient Railway, under construction in Texas, will traverse the quicksilver mining district in the southwestern part of the State. Much activity prevails at present in this industry, and it is stated that several furnaces are to be built in this section of the country, and that experts have found deposits which are among the most extensive in the world. A number of the principal beds are located in Brewster county.

Proposed Waterway.

A Texas dispatch states that considerable interest is being manifested in the plan to complete a navigable waterway which will extend from Donaldsonville, La., to Brownsville, Texas, traversing Southern Louisiana and the southern and eastern coasts of Texas. It is intended to utilize navigable streams, and to excavate a canal for a portion of the distance deep enough to allow light-draft steamers to ply between Brownsville and Donaldsonville and New Orleans.

The American By-Products Co. of New Jersey has been incorporated, with a capital of \$3,000,000, to manufacture paper from cottonseed hull fiber and flax fiber combined. The principal place of manufacture is to be Niagara Falls, N. Y., the flax being reduced to tow in Iowa and South Dakota, and plants for extracting the fiber from cottonseed hulls being established at different points in the South.

It is stated that a bill is being prepared providing for the establishment of a branch in Macon, Ga., of the State School of Technology for the purpose of giving instruction in manufacturing kaolin and fire-clays. The bill will be introduced in the house by one of the representatives from Bibb county, and will call for an appropriation of \$10,000, which amount will be duplicated by Macon citizens.

Of 363 new industries, representing a capitalization of \$10,000,000, which were established during the fiscal year along the lines of the Illinois Central Railroad and its allied road, the Yazoo & Mississippi Valley, 232 are in States south of the Ohio, Kentucky having 63, Louisiana 15, Mississippi 118 and Tennessee 36.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

West Virginia Electric Lines.

[Special Cor. Manufacturers' Record.]
Wheeling, W. Va., October 9.

One of the most remarkable spectacles coincident with the present marvelous industrial growth of West Virginia is the demand for the electric railway. Within the past month a number of important trolley enterprises have been placed on foot. One of them means the connection of Wheeling with Pittsburg within a very few years, or, it may be, months. The Wheeling & Elm Grove Railway Co. is now building its line to the Pennsylvania boundary, and has made application in Washington, Pa., for a franchise to extend it to West Alexander, Pa. At the same time a company is being formed in Pittsburg to extend one of the Smoky City traction lines to Washington. The construction of the two roads, both of which are assured, leaves a link of sixteen miles between West Alexander and Washington. This causes trolley projectors to place implicit confidence in the dreams of railway builders that a trolley seventy miles long will connect Wheeling and Pittsburg by the close of 1902.

In the Panhandle, especially in Wheeling and vicinity, trolley projects are budding prolifically. The Citizens' Railway Co., headed by J. E. Park of Wheeling, has applied for a franchise to build a line paralleling present roads. Another company is being formed by Henry Schmulbach, a millionaire brewer, for the purpose of building a trolley road from the heart of the city to a populous suburb. Still another company, the Suburban or Panhandle Traction Co., is building a line from Wheeling to Wellsburg, a distance of sixteen miles. Another company backed by Joseph Handlan and others of Wheeling are asking for the right to bring an Ohio road, the Interstate, into the city, crossing the Ohio river at Bridgeport, opposite Wheeling.

In addition, the central part of West Virginia is feeling new impulses, and people are becoming more impatient for more rapid communication with one another. Work on a new road at Clarksburg has begun. A. P. Gladden has received a contract to build a power-house for the Fairmont & Clarksburg electric road, which is making many important extensions. Surveyors are mapping a route for a trolley between Salem and Adamston. The line will be fifteen miles long. Besides these enterprises, which may be regarded as being practically assured, are others in an uncertain state. Grafton wants a line, and surveys are being made for it.

Attractive Publications.

Some unusually attractive literature has recently been prepared by the Central of Georgia Railway Co. It seems as if the company called into service the best artists as well as writers whom it could procure, while the camera has been a powerful aid. The literature includes a description of the great fruit orchards along the line of the Central under the title of the "Garden Spot of the South," and not only contains photographs of these, but views showing the extent of grain-growing, stock-raising and other branches of agriculture. "The Resources of the South" is a pamphlet embellished with striking views of the scenery in cities reached by the Central, as well as farming, manufacturing and other interests. One of the most interesting is that of the terminals of this system at Savannah. Another booklet deals en-

tirely with Savannah, and is really a work of art in its typography and illustrations, besides containing much interesting data. The covers of the booklets are prepared from purely original designs, and form special features of interest. The matter relative to fruit-growing and other resources was prepared under the direction of R. L. Pritchard, industrial agent of the company at Savannah.

Terminals at Mobile.

The Mobile, Jackson & Kansas City Railroad Co. has completed plans for terminals and other improvements at Mobile, which, it is estimated, will cost \$500,000. The improvements include additions to the present office building, a new round-house, machine shops, coal sheds and blacksmith shops, also a considerable mileage of extra track at what is known as Choctaw Point. It is also stated that the company intends erecting repair shops and warehouses for the purpose of handling export traffic.

The extension of the railroad from Merrill, the present terminus, to Hattiesburg, Miss., a distance of forty-six miles, has been graded a distance of eighteen miles, and tracklaying is in progress. In connection with this work it is reported that the company contemplates a further extension to Laurel, Miss., and that surveys are now being made.

Extending to the Gulf.

In a letter to the Manufacturers' Record Mr. J. W. Oglesby, president of the South Georgia Railway Co., writes that the company now has fifty-one miles in operation between Heartpine and the southern terminus of the road at Greenville, Fla. Work is in progress upon the extension south from Greenville, and ten miles of grading have been completed. Mr. Oglesby states that it is intended to terminate the road at Tampa, Fla., which will make it one of the most important systems in this part of the South. The South Georgia has an interesting history. It was planned to be constructed a few miles through lumber territory in the State named, but owing to the demand for transportation facilities has been steadily extended. It was built principally by business men of South Georgia.

May Buy Western Maryland.

For some time past the city authorities of Baltimore have been negotiating with parties who, it is understood, have desired to secure a controlling interest in the Western Maryland Railroad. The city of Baltimore is the owner of a large issue of its securities. Mayor Hayes admits that the Gould syndicate has become interested in the matter. The latest report concerning the operations of this system is to the effect that it has secured an entrance into Pittsburg for the Wabash Railroad, and is looking for a suitable tidewater terminus. By acquiring the Western Maryland it would obtain a very valuable right of way reaching the Baltimore harbor. It is understood that a controlling interest in the road would be sold for \$8,000,000.

Chesapeake & Western Extensions.

A dispatch from Harrisonburg, Va., is to the effect that the Chesapeake & Western Railway Co. has filed a mortgage to the Bowling Green Trust Co. of New York to secure a bond issue of \$1,435,000 to be used in extending its line to a point in Tidewater Virginia on the York or Potomac river, and westerly into West Virginia. As already stated in the Manufacturers' Record, an extension is nearly completed to North River Gap, in Virginia, from Bridgewater, the present terminus. Surveys have also been made

further west, it is reported, into the West Virginia coal fields. With the proposed new mileage, the line will be nearly 200 miles in length.

Another Road for Natchitoches.

In a letter to the Manufacturers' Record Mr. D. C. Scarborough of Natchitoches, La., who has been agitating the extension of the Louisiana & Northwestern Railroad to that town, writes that a contract has been made with the company by which it agrees to build the extension, forty miles in length, and to locate its shops at Natchitoches. In return, the company is given right of way through the parish and the town, crossing the Red river four miles from Natchitoches. The Louisiana & Northwestern is now in operation between McNeil, Ark., and Gibsland, La., a distance of seventy-eight miles.

Opportunity for Investors.

In a letter to the Manufacturers' Record Mr. George C. Thompson, president of the American-German National Bank of Paducah, Ky., writes that an excellent opportunity is offered to construct an electric railroad between Paducah and another point in Kentucky, which would be doubtless encouraged by local capitalists. He states that a proposition of merit will be made to projectors of such an enterprise.

A Powerful Crane.

The Southern Railway Co. has recently added to its equipment a wrecking crane, which has attracted much attention from engineers on account of its power and combination of improvements. It is powerful enough to lift fifty tons to a height of nineteen feet if desired, and, including the car on which it is mounted, weighs eighty-three tons. It is operated by a steam engine mounted upon the car which supports it.

Illinois Central Extensions.

The branch of the Illinois Central in Mississippi between Rosedale and Dockery, on the Sunflower river, is practically completed, and train service will be in operation over it October 31. The line is thirty-three miles in length. Another extension of the Illinois Central in Mississippi six miles in length is nearly completed, and it is expected to place it in operation by November 1.

Increase in Salaries.

The Illinois Central Railway Co. announces an increase of salary which will affect 5000 of its employees and amounting to nearly \$500,000 annually. The increase will go into effect on November 1.

Railroad Notes.

The Coal & Iron division of the West Virginia Central & Pittsburg Railroad will be ready for operation by January 1. This division will connect the West Virginia Central and the Chesapeake & Ohio lines.

It is officially announced that the Baltimore & Ohio Railroad has secured the coal piers owned by the Consolidation Coal Co. at Locust Point, Baltimore, and will use them for the distribution of coal to points along the Baltimore harbor. The company will use the terminals at Curtis Bay for all other domestic as well as export shipments.

The demand for houses at San Antonio, Texas, is greater than the present supply. At the last session of the Business Men's Club the committee on real estate strongly advocated the building of cottages, flats and apartment-houses as safe investments.

FOREIGN TRADE.

This department is designed to set forth opportunities for the extension of the trade abroad of American manufacturers, and to record facts about the rapidly-developing commerce of the South.

Exports to South Africa.

The value of South Africa as a field for American export trade is again demonstrated by an order placed with the Carnegie Steel Co. for 10,000 tons of rails for the South African British Railroad. It is also stated that an order has been given to the American Locomotive Co. for twenty-nine engines, while negotiations are being conducted with the Pressed Steel Car Co. of Pittsburg for a quantity of other rolling stock. Sir Charles Elliott, representing the government of Cape Colony, who has been purchasing the material, states that the orders have been placed in the United States merely for the reason that it can be secured of better quality and lower in price.

Port Arthur to Europe.

A dispatch from St. Louis, Mo., announces that contracts have been made with the shipping firm of G. L. Soler & Co. of Liverpool for a steamship service between Port Arthur, Texas, and European ports. It is intended to operate three vessels monthly at first, the fleet to be increased as traffic demands. The vessels will have a cargo capacity ranging from 4000 to 6000 tons. The Kansas City Southern Railroad Co. is interested in the project.

Improvements at Gulfport.

Although the harbor improvements at Gulfport, Miss., have been nearly completed, the Gulf & Ship Island Railroad Co. and others interested will endeavor to secure an appropriation of \$500,000 from Congress to carry out additional plans with the view to allowing much larger vessels to reach Gulfport than can approach it at present. A convention will be held at Gulfport on November 7 in the interest of the scheme.

Cargo of Export Oil.

The British steamship Cardium, which recently arrived at Philadelphia, has been ordered to Sabine Pass to load a cargo of fuel oil for Europe. The vessel, which is one of the tank class, will take on 2,500,000 gallons from the Texas district.

An order is now being filled for Western Australia from the United States which calls for 300 cars, and represents an expenditure of \$300,000. The Paris & Orleans Railroad Co. of France has also ordered 100 freight cars from an American company.

Savannah to New York.

Messrs. James M. Elwell & Co. of New York, it is reported, are agitating a plan to establish another line of steamships between Savannah and New York, to be devoted entirely to the freight business. It is stated that the company now has under control a fleet of four vessels, each of which will carry 3500 tons. A plan has been advocated of running two of these directly between Savannah and New York and two between New York and West Indian ports. The firm is conferring with Savannah business men in the interest of the project.

Business men of New Orleans are preparing to give a formal welcome to the government dry-dock for the Algiers Station, which started last Tuesday on its trip from the Maryland Steel Co.'s works at Sparrow's Point, Md.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

A \$300,000 Cotton Mill.

The project of Chicago parties for the establishment of a cotton factory at Davis, Ind. Ter., will take definite form, and the plant will soon be equipped. The machinery will consist of 23,000 spindles, 750 looms and other necessary complement, and probably water-power will be utilized. The product is to be brown domestics, and organization of the company is to be effected under the title of the Indianola Cotton Mills, with capital stock of \$300,000. The machinery will be removed from a plant at Janesville, Wis. J. H. Christian, manager of the Crolsen Manufacturing Co. at 119 La Salle street, Chicago, is one of the promoters of the enterprise.

The Cotton Movement.

In his report for October 11 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during the forty-one days of the present season was 1,313,895 bales, a decrease under the same period last year of 344,522 bales; the exports were 575,885 bales, a decrease of 108,424 bales; takings by Northern spinners 135,565 bales, a decrease of 12,232 bales; by Southern spinners 216,236 bales, an increase of 43,628.

Textile Notes.

W. H. Leak of Kernersville, N. C., will establish a knitting mill.

Runnymede Hosiery Mills of Tarboro, N. C., will install a dyeing plant.

J. M. Greenfield of Kernersville, N. C., will establish a knitting mill, and has already purchased the necessary machinery.

The organization of a cotton-mill company is proposed at Beaumont, Texas, by C. W. Howth. A \$100,000 enterprise will be formulated.

Marietta (Ga.) Knitting Co. has decided to purchase seventeen additional knitting machines, which will increase its complement to 116 machines.

Smitherman Cotton Mills of Troy, N. C., is reported as to install 100 looms. This plant now operates spindles only, having 3328 in position.

The Newton (N. C.) Hosiery Mills has completed the installation of its dyeing plant, and is now adding a 50-horse-power engine and a large power press.

The Randleman (N. C.) Hosiery Mills were destroyed by fire during the week, entailing a loss of about \$22,000. The insurance is said to aggregate \$15,000.

The Itasca (Texas) Cotton Manufacturing Co. will use Beaumont oil for fuel. Three tanks are being constructed under ground, and the necessary equipment is being installed.

The Waxahachie (Texas) Cotton Mills has discarded coal as fuel for its furnaces and now burns Beaumont natural oil. The change is said to give entire satisfaction to the company.

Messrs. E. J. Kiest, Philip Sanger and A. P. Tenison will endeavor to organize a company for establishing the knitting mill lately reported as proposed at Dallas, Texas. A \$25,000 stock company is the plan.

It is reported that the Brookside Mills of Knoxville, Tenn., will install 100 additional looms and other machinery. This company is now operating 26,000 spindles and 650 looms on the production of a special grade of cloth.

Messrs. William W. Campbell, J. W. Bryan, C. E. Bruce, T. J. Carnathan and N. M. Byars have incorporated the Hatchie Manufacturing Co., with capital stock of \$12,000, for the purpose of operating a woolen mill.

At a meeting of the Chamber of Commerce of Huntsville, Ala., during the week T. W. Pratt stated that representatives of a large cotton factory in New England were seeking a location in the South to which to remove their plant.

The Belton (Texas) Cotton Mills has decided that its product will be brown sheeting, and is now producing a large quantity of that character of goods daily. This \$100,000 company has discarded coal as fuel and is using Beaumont oil.

The Mallard Lumber & Bobbin Co., just chartered at Greenville, S. C., will manufacture lumber, bobbins and other cotton-mill specialties. Messrs. James L. Orr, J. W. Gagle and E. G. Mallard are the incorporators; capital stock is \$50,000.

The Great Falls Manufacturing Co. of Rockingham, N. C., W. N. Everett, receiver, will offer its plant for sale to the highest bidder on November 4. The mill has 4500 spindles, 133 looms, etc., complete for manufacturing sheeting and drill.

The Twin City Power Co. proposes the erection of a cotton mill to assist in utilizing the power the company has developed on the Savannah river near Parkersville, S. C. D. M. Mackaye, the general manager, is said to be preparing for the commencement of work.

James Collins, mayor of Stephenville, Texas, proposes the organization of a company to build a cotton factory. The company is to be named the Stephenville Cotton Mill Co. and have a capital stock of \$100,000, divided into 10,000 shares of \$10 each. Subscriptions to the stock are now being solicited.

The Norfolk (Va.) Silk Mill Co. has decided upon extensions and improvements to its plant that will necessitate the employment of 125 more hands. These betterments will furnish employment for many of the operatives, who are idle because of the recent cessation of operations in the knitting mill at Lambert's Point.

The Cherokee Falls Manufacturing Co. of Blacksburg, S. C., has let contract to R. F. Rankin for the erection of an additional building to its mill. The new structure will be three stories high, 100x104 feet, and presumably it is the intention to put new machinery in it. The company now operates 15,500 ring spindles and 548 looms on the production of print cloths.

The Henderson (Ky.) Cotton Mills has filed a mortgage for \$150,000 to secure the issuance of 20-year 5 per cent. bonds. The bonds are to be issued in denominations of \$5000 each, and are redeemable at the company's pleasure. The purpose for which the funds is intended is not stated. This plant is one of 22,080 ring spindles, 12,224 mule spindles and 916 looms; it is capitalized at \$450,000.

The twentieth century publication of the Southern Cotton Spinners' Association contains the constitution and by-laws of the organization, a list of its officers and members, the report of the proceedings at its last annual meeting, with the addresses made by President J. H. McAden, Theodore C. Search, Arthur H. Lowe, George Otis Draper, Sydney H. Paine, D. A. Tompkins, Arnold B. San-

ford, Leonard Paulson, John Barrett and Richard H. Edmonds. This is followed by a comprehensive sketch of the history of the association.

The Jacksonville (Fla.) Knitting Mills has completed the equipment of a plant to replace its burned mill. The new plant is valued at about \$30,000, and all of the machinery will be operated by electricity. Plans for a building, to be occupied early in 1902, have been accepted by the company, and contracts for its erection will be placed soon. This building will be a three-story structure, 60x110 feet. C. E. Garner is president.

The Southern Hosiery Mills of New Berne, N. C., has been incorporated, with capital stock of \$125,000, business to be commenced when \$10,000 have been subscribed. The incorporators are Messrs. P. H. Pelletier, T. W. Dewey and M. M. Marks. P. H. Pelletier is proprietor of the Clermont Mills, and announced several months ago his intention to organize stock company for enlarging and continuing his enterprise.

QUOTATIONS OF COTTON YARNS.

By Buckingham & Paulson, New York, Philadelphia and Chicago, October 15.

No. 16s-1 and 12s-1 warps.....	13 @13 1/2
No. 14s-1 warps.....	13 3/4 @14
No. 16s-1 warps.....	14 @14 1/4
No. 20s-1 warps.....	14 1/2 @15
No. 22s-1 warps.....	15 @15 1/2
No. 26s-1 warps.....	15 1/2 @16
No. 6s to 10s bunch yarn.....	12 1/2 @13
No. 12s-1.....	13 @13 1/4
No. 14s-1.....	13 1/4 @14
No. 16s-1.....	14 @14 1/2
No. 20s-1.....	15 @15 1/2
No. 22s-1.....	15 1/2 @16
No. 26s-1.....	16 @16 1/2
No. 8s-2 ply soft yarn.....	13 @13 1/2
No. 10s-2 ply soft yarn.....	13 1/2 @14
No. 8s-2 ply hard.....	12 1/2 @13 1/2
No. 10s-2 ply hard.....	13 @13 1/2
No. 12s-2 ply.....	13 1/2 @14
No. 14s-2 ply.....	14 @14 1/2
No. 16s-2 ply.....	14 1/2 @15
No. 20s-2 ply.....	15 @15 1/2
No. 22s-2 ply.....	15 1/2 @16
No. 26s-2 ply.....	16 @16 1/2
No. 30s-2 ply yarn.....	17 @17
No. 40s-2 ply.....	22 @22 1/2
No. 8s-3, 4 and 5 ply.....	12 1/2 @13 1/4
No. 20s-2 ply chain warps.....	15 @15 1/2
No. 24s-2 ply chain warps.....	16 @16 1/2
No. 30s-2 ply chain warps.....	16 1/2 @17
No. 36s-2 ply chain warps.....	17 1/4 @17 1/2
No. 16s-3 ply hard twist.....	14 1/4 @15
No. 20s-3 ply hard twist.....	15 @16
No. 26s-3 ply hard twist.....	16 @17

C. W. Tebault of Norfolk, Va., promoter of the Norfolk Shipbuilding & Dry-Dock Co., has issued a prospectus of the enterprise, announcement of which was made last month. The capitalization will be \$5,000,000 instead of \$2,000,000, as was at first intended, and \$1,000,000 have already been subscribed. A tract of land on Hampton Roads has been secured as site for the plant, and steps are to be taken for completing all the arrangements soon, so that active work on its construction may be commenced.

Contract has been awarded for the construction of a bridge at Hinton, W. Va., to cost about \$45,000. This bridge will be owned and operated by the Hinton-New River Bridge Co., and it will be not only a source of revenue to its owner, but also enhance property values in the town and nearby county. The structure will be of stone and steel, 1200 feet long, with 18-foot roadway, and be 60 feet above low water. The American Bridge Co. of New York was the successful bidder.

A novel industry is now in operation near Morehead City, N. C. It is a "porpoise factory," and utilizes the porpoise for various purposes. The skin is suitable for fine shoes, a valuable oil is taken from the head, and still another grade of oil comes from the blubber. The fishermen on the North Carolina coast in catching the porpoise rid the waters of an annoying fish and profit by the riddance.

During the year ended September 30, 15,216,387 pounds of leaf tobacco were sold at Winston-Salem, N. C., for \$1,017,065.02.

COTTONSEED OIL.

Cottonseed-Oil Notes.

The Richmond Cotton Oil Co. of Chattanooga begun operating its mill at Alton Park last week with a force of seventy-five hands. The mill has been shut down since April last.

Since the opening of the cottonseed season on September 1 the farmers of Mecklenburg county, North Carolina, have realized over \$5000 on the sale of cottonseed, as indicated by the purchase of one agency.

At a meeting of the stockholders of the Refuge Oil Mill Co. of Vicksburg, Miss., held in that city on the 8th inst., Mr. P. M. Harding was re-elected president, and Mr. E. M. Durham, the present manager, secretary and treasurer.

The cotton-oil mills at Little Rock are said to be working at their full capacity. Cottonseed is higher than it was last year at the opening of the season, with indications that it will yet go higher. The mills are paying \$14 at station, which means \$16 at mill.

The seedhouse at Norwood, S. C., belonging to the Gate City Oil Co. of Atlanta, was destroyed by fire on the 8th inst. It contained 60,000 pounds of cottonseed and 6000 yards of bagging and a lot of ties owned by the Ward and Cooper ginners.

The demand from mills at Caldwell, Texas, for cottonseed has been so pronounced thus far during the season that the product brought \$19.75 per ton last week. Receipts at that point are heavy, large quantities of seed coming from every direction.

At a mass-meeting of the farmers of Marion county, South Carolina, last week it was resolved that cottonseed is worth to the farmer as fertilizer twenty-five cents per bushel, and should be exchanged for meal on a basis of 100 bushels of seed for one ton of meal. They pledged themselves not to sell or exchange for less, and urged the co-operation of every cotton-grower in the State to that end.

At Galveston on the 14th inst. cottonseed products were steady, exporters' figures ranging as follows: Prime crude, loose, f. o. b. mills, 32 cents; prime refined, October-November, 36 1/2 cents; prime cottonseed cake, short ton f. o. b., October, \$22.75, and prime cottonseed meal, October, \$23.50, October-November, \$24; linters, compressed, f. o. b., choice, 3 3/4 cents; A, 3 1/4 cents; B, 2 3/4 cents.

It is stated that a definite reply is expected in the near future by the stockholders' committee of the American Cotton Oil Co. from the New York Stock Exchange listing committee in regard to listing the certificates of deposit of the First National Bank on the exchange to replace the regular stock certificates. It is said that a circular will be issued to cotton-oil stockholders after the question of listing is settled.

The following are the official quotations on cottonseed and cottonseed products as posted at the New Orleans Cotton Exchange on the 14th inst.: Prime refined oil in barrels, 39 cents per gallon; off refined oil in barrels, 38 cents per gallon; prime crude oil, loose, 33 cents per gallon; off do., nominal per gallon; prime cottonseed cake, \$24.50 per ton of 2240 pounds; off do., nominal; prime cottonseed meal, \$24.25 per ton of 2240 pounds; off do., nominal; soap stock, loose, 1.15 cents per pound; linters, per pound, choice, nominal; A, 3 1/4 cents; B, 3 cents; C, 2 1/4 cents; cottonseed in sacks delivered in New Orleans, \$14 per ton of 2000 pounds; in bulk delivered in New Orleans, \$13 per ton of 2000 pounds.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., October 16.

The volume of business in nearly every avenue of the local lumber trade shows material improvement so far during the present month, and the demand is regular and for larger lots, as a rule. Receipts of lumber continue moderate, and in most descriptions stocks are being somewhat reduced by the recent heavy drain on mills to supply an urgent demand. The movement in North Carolina pine is very satisfactory, and the volume of business in this line shows considerable expansion as the season progresses. For the better grades the market for kiln-dried lumber is firm, with an upward tendency; in fact, throughout the entire list prices obtained are often above quotations. The market for Georgia pine is very steady, with prices firm and slightly advanced on the larger sizes. White pine is steady, with the movement more extended and stocks not excessive. The hardwood trade is improving, with a better inquiry from local manufacturers and nearby towns. In the export trade the volume of business does not increase to any extent, while values here are well maintained, and prominent firms do not solicit business below quotations. The European market shows no great degree of activity, but there are indications that the business in all commercial woods will soon show an improvement at all European points. The London Timber Trades Journal of the 5th inst., in reviewing the market, says: "The timber trade during the past week seems to have been carried on in a more hopeful way than for some considerable period previously, although the transactions are far from satisfactory or remunerative. A large decrease in the arrivals has to be recorded, and the impression is gaining strength that the import for the year will be much less than that of the previous one. Very little chartering is doing, which further strengthens the belief that the bulk of the foreign supply has now been received. The stock on hand is undoubtedly a large one, but the limited nature of the back-end shipments will afford breathing time for merchants to turn it to better account than they have lately been doing. The prospect is every way brighter than we have previously reported, and the development of events is likely to further strengthen the hands of the large dealers, who have hitherto had to realize on a falling market. The mahogany and hardwood market continues quiet, with a slow demand, and the small business passing has been done on the basis of former sale rates. There have been no public sales this week, but at the last sale by auction at the latter end of last week there was a sparse attendance, with slow bidding and competition."

Norfolk.

[From our own Correspondent.]
Norfolk, Va., October 14.

The outlook for business in nearly every avenue of the lumber industry of this section is considered very encouraging by manufacturers and commission men generally. The movement so far this month has been active, and in North Carolina pine the demand is brisk, the market for rough lumber being very steady, with a good inquiry for the better grades. Edge box has improved, and the demand is very steady. At milling sections in the North Carolina pine belt the

demand is greater than the supply, and prospects for the season are better than they have been for years. Mills are cutting more than usual, as the streams being full, logs are less difficult to move. From Northern and Eastern sources the tone of the market is firm, with a good inquiry, and buyers are adding largely to their stocks. The building trade in New England is very active, and shippers here have been making some good sales during the present month. The foreign demand for North Carolina pine is quiet, there being very few orders on file at the moment. Dressed lumber here is in better demand, and planing mills are rushed with orders. Large lots of lumber and other material are going into consumption at local and suburban points, and builders are now generally busy. In the hardwood line the movement is fairly active, and there is a moderate demand for all commercial hardwoods, with prices steady. Freights continue steady, with a moderate offering of desirable tonnage.

Savannah.

[From our own Correspondent.]
Savannah, Ga., October 14.

Throughout the saw-mill section of Southern Georgia the lumber industry at present is generally in good shape, and all the mills working under favorable conditions. The demand is good, orders being booked ahead from thirty to ninety days, with offers for delivery extending into March, 1902. The market at this port has been fairly active so far this month, and shipments above the average. The bark James A. Wright for Philadelphia cleared with 618,412 feet of lumber, and schooner John B. Manning for New York with 824,497 feet. Steamers for Baltimore, New York and Philadelphia carried out over 1,500,000 feet. The market for lumber has ruled very steady, with values f. o. b. as follows: Minimum easy size yard stock, \$10.50 to \$11; car sills, \$12 to \$13—stock 14 to 16-inch, depending on length, \$15 to \$16; ship stock, \$16; sawn ties, \$8 to \$9 per M feet; hewn ties, 35 cents each. Extra large coastwise lumber has been advanced \$1 per thousand by the Georgia Saw-Mill Association. This advance was deemed advisable owing to the difficulty in securing these special lengths and sizes. Prices on all other grades of lumber remain the same. Lumber freights by rail are easy, with a tendency to a lower range. Charters last week were as follows: Schooner O. S. Barrett, 561 tons, Darien to Philadelphia with hewn timber at \$6.25 and resawed lumber at \$5.50; schooner D. D. Haskell, 260 tons, St. Simons to New York with lumber at \$5.50; schooner V. King, 966 tons, from Brunswick to New York with ties and guard rails at 16½ cents and lumber at \$5.50; schooner Mary Manning, 1130 tons, Brunswick to New York with ties at 14½ cents; schooner C. J. Sibley, 358 tons, Savannah to New York with lumber at \$6.40 M feet a day, and schooner Hugh Kelley, 608 tons, Brunswick to New York or New Haven with lumber at \$5.50.

Mobile.

[From our own Correspondent.]
Mobile, Ala., October 14.

During the week under review the market has shown a fair volume of business in both lumber and timber. The latter is held firm, with holders asking 14 cents, while exporters offer 12½ cents, and for November-December delivery 13 cents is bid. Manufacturers of timber are looking for higher prices, but exporters are not anxious buyers at their figures. During the past week the steamer Cluden cleared for Rotterdam with 10,560 cubic feet of hewn timber, 126,789 cubic feet of sawn timber and 1,521,372 superficial feet of lumber. The steamer Larrinaga

cleared for Liverpool with 100,000 cubic feet of hewn timber, 78,000 cubic feet of sawn timber and 631,442 feet of lumber. Steamer Hugin cleared for Cuban ports with 524,443 feet of lumber, and steamer Nord for Tampico with 3750 feet of lumber. There is a fair demand for lumber, but for the export trade the volume of business is light, the demand being mostly from Cuba and Mexico. At Pensacola the fall business is setting in with a number of vessels in port and to arrive this month, so that the outlook is considered good for an average trade. Receipts of timber at Ferry Pass have been light during the week, but rains in the interior are causing a good stage of water in the rivers, which, it is stated, will bring out some choice timber. Shipments have reduced the stock at Pensacola to about 27,000 pieces. Charters reported during the week are as follows: German steamer Tertia, 1300 tons, Pensacola to two ports, Italian, Mediterranean, with timber at 100/, and Russian bark Eliel, 639 tons, Mobile to the Continent with timber at 105/. Messrs. Fred O. Howe & Co. of Pensacola, in their circular dated October 1, reports the market and trade of that port as follows: "Freights continue dull, with little or no demand; current quotations for sail are £5 to £5 5s., U. K. or Continent: £4 15s. to £5, Mediterranean. For South America market is easier, and we quote \$12.50 to \$13 Buenos Ayres, Rosario \$1 extra, and Rio \$13.50 on clean form, proportionately more on \$2 form. Pensacola's exports for September amounted to \$448,630. There entered during the month thirteen steamers, aggregating 23,364 tons, and nine sailing vessels, aggregating 9484 tons, and cleared thirteen steamers, total tonnage 23,116, and five sailing vessels, total tonnage 3178."

Memphis.

[From our own Correspondent.]
Memphis, Tenn., October 14.

Business in hardwood lumber circles here is rather disappointing to the majority of the trade for the season of the year. Recent letters from the export division of the market state that conditions have gone backwards rather than forwards, and manufacturers here have been advised by their Liverpool and continental correspondents to cease shipments altogether. The cause assigned for this state of affairs abroad is the fact that every manufacturer, including those at this point, threw a whole lot of stuff on the market and thus overstocked it before it was able to absorb the increased offerings. This is especially applicable to the Liverpool trade. With South Africa there has been a fair volume of business in dimension stock of ash, the best demand being for one to four inch thick, ten inches wide and up and 14x16 feet in length. There is some quartered white oak going forward also, though the oaks are, as a rule, particularly slow so far as the export trade is concerned. In domestic circles there has been much greater activity than in the foreign, especially in the Western cities. The demand for cypress and poplar has been brisk for some time past. Stocks of cypress are small, and all the output of the mills is already sold for future delivery at full prices. Poplar is being cut with considerable freedom, and there is more of this offering, though stocks are still relatively small. Ash is in better supply, though prices are ruling firm at the level noted for the summer months. This is one of the best sellers in the entire list at the moment, the demand being well distributed throughout the country. Cottonwood continues dull in the lower grades, though in fair call in the better class of stock, especially the box boards, which are scarce and very much wanted. Gen-

erally speaking, however, the cottonwood situation is much more healthy than it has been for some months, as a result of the reduction of the output and the increase in the consumption of this wood, the former growing out of the stoppage of the saw-mills and the latter out of the better demand from the manufacturers of boxes and box shooks. The oaks are in fair call, especially plain red and plain white, though the quartered oaks are in slow request, with the movement on a very small scale. The mills are pretty well all running on full time, and the output of most classes of woods is in excess of the demand, with the result that stocks are accumulating all the while, though it is worthy of note that, despite the slowness of movement and the apparent lack of interest on the part of buyers, sellers are not disposed to shade their prices. The latter contend that it is only a question of time until buyers will be less independent; that stocks are not excessive, and that as soon as conditions return to the normal there will be a relatively small amount of stuff offering, and that the manufacturer who remains firm now will come out the winner by this policy. The timber supply is fair, as a rule, though some of the mills here have comparatively small stocks on hand. The log men have not been as active this year as a general thing, and it is thought among the better informed that this will do a great deal toward helping out the lumber industry by forcing buyers back into the market with greater freedom. The building woods are all in active request, and the movement of these is far in excess of the normal. The building boom grows apace, and this is sufficient of itself to tell the whole story in softwood circles. The various woodworking plants are all busy; in fact, are entering their busiest season, and the situation among these is about as satisfactory as could be desired, and in striking contrast with the general lumber industry.

Beaumont.

[From our own Correspondent.]
Beaumont, Texas, October 12.

The lumber industry during the past ten days has had an average business. Throughout Texas, Mexico, Southern Louisiana and the Indian and Oklahoma Territories there has been a good trade, and the business coming from all these markets has tended to keep the mills busy. There has not been quite as much business directly from Texas dealers as was expected. This is probably accounted for by the fact that in some portions of the State the cotton crop is quite short, and as this is the main crop, when it fails, naturally general business suffers. Just what the future will be for the lumber markets generally is rather difficult to forecast. There has been a partial failure of the crops in the Western States, and this, together with the threatened shortage of cotton in Texas, may have a quieting effect on business during next spring, for there is no industry so sensitive to the business barometer as the lumber business. There is no question but what the manufacturers will enjoy a good trade during the remainder of the year, for the unprecedented shortage of lumber at the mills would operate to counteract the effect of any diminished demand, even should there be such during this year, which is not probable; however, the outlook for trade next spring just at this writing is not particularly bright. There has been no weakness shown in the values of lumber so far. The various lists issued by the lumber companies are fairly well maintained. Piece stuff on an 18½-cent rate is bringing \$14.50 to \$15, while flooring is averaging \$20.50 for 1x4 clear. Stocks continue to decrease at the long-leaf mills,

October showing some 3,000,000 feet short over the previous month. The items that are in shortest supply are 1x12 18-foot and up common, 2x4 18-foot and up common, 1x4 and six-inch clear and star, from which flooring and ceiling, siding, etc., are made. With reference to the timber trade there is no question but what there is an enormous demand in this line for everything which the mills can make. The demand for square edge and sound ties, and also the standard heart specification, is something abnormal. The hearts are selling today at \$12 per M feet at the mill, whereas in 1896 they sold for \$7 at the mill. It is very doubtful if today a large contract for heart ties could be made for anything like prompt delivery at the price named. As for saps, every mill in the entire district is loaded with this commodity. Prices range from \$7.50 to \$9, and even \$9.50, according to the freight rate prevailing from that particular mill. Within the last three weeks enquiries from some of the most prominent railroads in the Southwest have come to the mills for railroad stringers alone aggregating 10,000 pieces, which is nearly 3,000,000 feet. Besides this, a large quantity of caps, guard rails, sway braces, etc., are wanted to go with the stringers. Mexico, New Mexico and Arizona have taken an immense quantity of timber during the past few months for railroad building. Few are aware of the immense improvements that are going on out in that section of the United States. There are numberless new mines being opened up, which all require a large amount of timber in their operation. In addition to this, the Eastern coast ports are taking considerable lumber at this time by cargo shipment. This is about the only phase of the export business that is at all encouraging to the Texas and Louisiana mill men. There is some activity in lumber across the water, and considerable enquiry reaches the Texas mills, but the prices which exporters state they can pay for material are such as to entirely prevent business. It is understood one South American schedule, probably Rio, has been placed here the past week, and if this be true, it is the first South American that has been on the books of any Texas mills for many a long day. The price is about \$13 at the Pass, alongside vessel.

Lumber Notes.

Receipts of lumber at New Orleans for the week ending the 11th inst. amounted to 1,850,500 feet, and for the season 21,950,296 feet, against 24,477,121 feet last season.

The dry-kiln of the Josseland Lumber Co. at Josseland, Texas, was destroyed by fire on the 8th inst., together with 50,000 feet of lumber; loss estimated at \$3500, with no insurance.

The shipments of lumber from the port of Mobile last week amounted to 2,681,107 superficial feet, of hewn timber 110,560 cubic feet, and of sawn timber 204,789 cubic feet, the total shipments being 6,465,295 superficial feet.

Messrs. Lutz & Sebold of the Hagerstown Spoke & Bending Co. of Hagerstown, Md., are about to erect a hardwood plant six miles north of Tallahassee, Fla. The company's representative has been purchasing hardwood timber and lands in that section recently.

George G. Banson & Co.'s big hub and spoke factory at Shelbyville, Tenn., with from \$10,000 to \$12,000 worth of wagons, hubs and spokes and valuable lumber, was destroyed by fire on the 9th inst. The total loss is estimated at \$15,000 to \$20,000. There was but \$1300 insurance.

The Ashley Lumber Manufacturing Co. of Hamburg, Ark., has been incorporated,

with a capital stock of \$10,000, all of which has been paid in. The officers and incorporators are J. H. Vanden Broom, president; H. R. Swartz, vice-president; L. J. Burbridge, secretary and treasurer.

W. J. Cude, a prominent lumber dealer at Kimmis, Tenn., sold last week to the Free-Bremner Lumber Co. of Chattanooga several carloads of lumber for export to France, Germany and Scotland. Mr. Cude makes shipments of hardwood lumber consisting of two or more cars daily.

The Falls tract of timber, near the Preston county (West Virginia) line, which has been in possession of the Pennock heirs of Philadelphia for nearly 100 years, has been sold to H. S. Hutson and J. L. Kendall of Connellsville for \$50,000. Messrs. Hutson & Kendall will develop the tract.

Walnut stumps are now being procured by the land-owners of the section recently opened up by the St. Louis & North Arkansas Railroad, and are being shipped to United Kingdom and continental ports. A contract has been closed with a large furniture establishment in Glasgow, Scotland, to supply the product.

A destructive fire occurred last week at Arkansas City, Ark., completely consuming the Paechpt-Leight Lumber Co.'s immense yard of cottonwood lumber, containing about 4,000,000 feet of seasoned lumber ready for market and six cars belonging to the Missouri Pacific Railroad. The lumber was partially insured.

It is stated that R. C. Kirkland of Valdosta, Ga., is about to establish an extensive lumber-exporting business at Tampa, Fla. The company he will manage is the Kirkland Lumber Co., and is composed of Valdosta men and Col. J. A. Cranford and Col. S. L. Varnadoes of Tampa. The company will handle pine and cypress lumber.

The schooner Austin D. Knight cleared last week from Jacksonville, Fla., for Elizabethport, N. J., with 320,000 feet of lumber; the Clyde Line steamer Arapahoe for New York with 400,000 feet of lumber among her cargo, and the Onaida for Boston with 200,000 feet of lumber, 1200 crossties, 150 packages of doors and miscellaneous cargo.

The furniture factory of the Lockwood Manufacturing Co. of Birmingham, Ala., was destroyed by fire last week. The loss will probably reach \$10,000. The building contained some valuable new machinery, which had been installed temporarily, having been purchased for the box factory now under course of construction adjacent to the furniture plant.

The output of lumber of the nine saw-mills of New Berne, N. C., with tributary small mills on the Neuse river, is stated to be upwards of 300,000 feet daily, or from 7,000,000 to 10,000,000 feet per month. The mills are running full time, some from twelve to fifteen hours daily, and others night and day. Logs at the mill are worth from \$4 to \$7 per thousand feet.

Messrs. Oglesby & Bro. and E. C. Bridges of Quitman, Ga., have purchased the timber lands of Dr. T. W. Hunter, which lie six miles northwest of Quitman. The land purchased amounted to 4500 acres, a large part of which is in virgin timber of a fine quality. The consideration was about \$35,000. The purchasers will establish a large mill at North Quitman to saw the timber.

F. J. Dudley and T. W. Butts, who own and operate planing mills at Columbus, Ga., will join forces and build and operate a mammoth factory of a much greater capacity than both the present mills combined. A stock company will be formed

and charter applied for. The new company will manufacture sash, doors and blinds for home consumption and export. The plant will give employment to 150 or 200 men at the outset.

The Cuban bark Mabel was towed into the harbor at Gulfport, Miss., on the 12th inst. This is the first vessel to arrive at Gulfport as a result of the completion of the first eight-foot cut of the channel between Gulfport and Ship Island. She is consigned to L. N. Dantzler, and will load with 300,000 feet of lumber for Havana, Cuba, taking the whole cargo at the Gulf & Ship Island Railroad Co.'s pier. The Spotswood Lumber Co. will have a large vessel in the Gulfport harbor this week, which will also take on a large cargo of lumber.

The Chattanooga District Furniture Exhibit is about to enlarge its capacity and combine its plans and scope of representation of the entire South, with headquarters at Chattanooga, Tenn. For this purpose a meeting has been called of all Southern furniture manufacturers, to be held in that city on the 23d of the present month, for the purpose of organizing a Southern Furniture Manufacturers' Association. The organization will not be confined strictly to furniture manufacturers, but to those engaged in kindred lines as well.

It is stated that Mr. John A. Graham, president of the Graham Cypress Co. at St. Marks, Fla., has sold to William L. Roach and associates of Muscatine, Iowa, the saw-mill, logging railroad and cypress timber, the property of the company. The sale includes 160,000,000 feet of the best cypress timber in the Gulf States. It is understood that Mr. Roach and his associates will enlarge the present plant to a capacity of 25,000,000 feet of lumber and 80,000,000 shingles per year. The entire plant will be in full operation within the next sixty days.

A meeting of the Georgia Saw-Mill Association was held on the 8th inst. at Tifton, Ga. More than seventy members were present, representing nearly all the large mills of Georgia and Florida. The members present reported full orders at the mills and contracts being accepted for delivery in 1902. Association's list of prices and better are being secured at all the mills. Prices on extra long and large coastwise lumber was again raised one dollar a thousand feet. The advance was deemed advisable owing to the difficulty of securing these special lengths and sizes. The next meeting will be held in Savannah during the State fair on Tuesday, November 12. William B. Stilwell of the Southern Pine Co. and G. W. Perkins of the Perkins Lumber Co. were appointed a committee to receive the visiting lumbermen.

The shipments of phosphate rock from the port of Fernandina for the month of September amounted to 28,030 tons, and the estimated shipments for October are 15,000 tons. The following steamers are chartered to load phosphate rock during October: Steamers Helmfield by Ford & Hiller, Glenely by C. E. Abson, Claudius by the French Phosphate Co., and Roehampton and Louise by J. Buttgenbach & Co.

Governor McSweeney of South Carolina has been notified by a citizen of Hampton county that he has discovered a supposed phosphate deposit in that county. Samples of the rock have been sent to the State geologist for analysis.

Prospectors who have been examining the phosphate beds of the Sumner Phosphate Co. in Sumner county, Tennessee, have found rock existing in larger quantities than at first supposed.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., October 16.

With the activity and firm tone to other fertilizers ingredients, the phosphate rock market shows signs of a better tone in a local way. Florida hard rock is stronger. Tennessee rock has been selling freely during the month, and values for domestic rock are generally steady. There is also an improvement in South Carolina rock, with prices nominally steady. The charters during the week were the schooner Frances M., 1096 tons, from Charlotte Harbor to Baltimore with phosphate rock on private terms, and schooner Medford, 1160 tons, from Port Tampa to Philadelphia with phosphate rock at \$2.10. The advices from the Southern phosphate belt are to the effect that the industry is in fair shape at the several mining districts. From the Florida field comes news of additional developments new deposits having been exploited and valuable purchases of land concluded in the Dunnellon region, extending from Elliston to Inverness, a section famous for the highest grade of hard rock. The tone of the market for hard rock is firm, and values are quoted at from \$6.50 to \$7 f. o. b. ports of shipment. Stocks of pebble rock have been considerably reduced by heavy shipments of Peace river and from Tampa, with the market at the moment firm, heavy sales having been made for 1902. In South Carolina the movement is fairly active among river miners, while there is a fair inquiry from foreign sources and some business with domestic ports. Values, as a rule, for both crude and hot-air-dried rock are very steady. At Mt. Pleasant the situation every day becomes more encouraging; recent prospecting of mines gives a fair showing of the actual amount of rock in sight, and the market is generally firm for both domestic and foreign rock. The demand is good, especially for foreign trade, and shipments are expected to be much better for early November and later on.

Fertilizer Ingredients.

The market for ammoniates has shown a greater degree of activity during the past week, and the demand for tankage, blood and other material from Southern sources has been more pronounced. Eastern buyers are only purchasing in small lots. Western packers hold stocks firm. The six months' contracts as yet have not been all disposed of.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)...	\$2 72 1/2 @ 2 75
Nitrate of soda, spot Balto....	1 90 @ 1 92 1/2
Blood	2 27 1/2 @ 2 30
Azotine (beef).....	2 30 @ —
Azotine (pork).....	2 30 @ —
Tankage (concentrated).....	2 17 1/2 @ 2 20
Tankage (9 and 20).....	2 20 @ 2 25 & 10
Tankage (7 and 30).....	20 00 @ 20 50
Fish (dry).....	26 00 @ 27 00

Phosphate and Fertilizer Notes.

The British steamship Duchess of York cleared from Savannah, Ga., for Liverpool last week with 1313 tons of high-grade Florida phosphate rock among her cargo.

The steamship Clinton cleared last week from Pensacola by the Gulf Transit Co. for Antwerp via Newport News with 2700 tons of Tennessee phosphate rock among her cargo.

It is understood that J. Buttgenbach & Co., large phosphate miners and shippers of Florida rock, have bought forty acres of phosphate land near Standard, Fla., known as the Walker tract. The consideration is said to be \$6000. At the phosphate mines at Standard but little active mining work is being done, as everyone is busy loading and shipping.

MECHANICAL.

Ashton Spinning-Ring Burnishers.

The S. A. Felton & Son Co. of Manchester, N. H., and Boston are interesting mill men with a very valuable device in the Ashton Spinning-Ring Burnisher. This device fills a want long felt, and



FIG. 1.

does away with the trouble of removing ring rails and rings from the frames, thereby saving time and labor, and leaves the rings in a much better condition for the work. The Ashton system removes gum, oil, dirt, etc., from the rings and burnishes them at the same time. It is

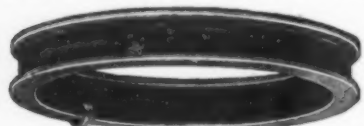


FIG. 2.

conceded by spinners generally that soaking rings in a potash bath leaves them with a deposit of crystals which even hot water will not remove, besides destroying the burnish, which is so essential to the perfect working of the traveler.

The Ashton Spinning-Ring Burnishers

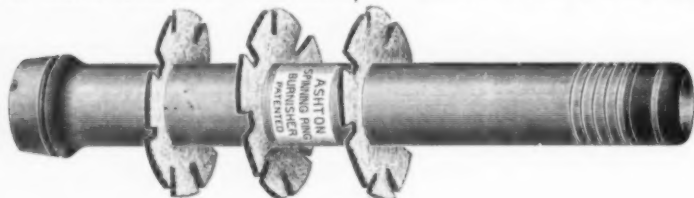


FIG. 3.

have been tested by experts and pronounced to be a superior contrivance for doing the work. This system is being adopted by progressive mill men, as it saves labor, waste and wear of rings and traveler, and produces cleaner, better yarn, and more of it at a less cost.

Double-Drum Tail-Rope Haulage Engine.

The accompanying illustration gives an idea of the merits of the engine offered the trade by the Robinson Machine Co. of Monongahela, Pa. These engines are of the latest improved design, simple, strong and durable, comprising first-class workmanship and material. They are built with or without link motion. The drums have heavy cast-iron flanges, with barrel of heavy steel boiler-plate lagging securely riveted to flanges. Each drum is keyed to its own shaft, and revolves independently of the other, and is bolted to gear wheel by a bolt through each arm, as shown in cut, thereby relieving the shaft, gear and drum arms of all torsional strain. The drums are fitted with foot-power or steam brakes, and have friction blocks bolted to drum flange or to the steel brake-band, as desired.

The gears are machine molded, massive and strong, with wide faces. The pinions carry clutch grips, and have wide bearings. The clutch is of the positive type, placed between the pinion wheels, and so adjusted as to grip either pinion or run idly between them, but can never grip both pinions at the same time, thus obviating the breakage of rope, as may happen when both gears are gripped at the same time. This clutch is operated by the latest improved screw-shifting device, and the entire machine is supported by heavy cast-iron frames set in the ma-

sonry. All shafts are steel, and run in Babbitt metal boxes.

The engines can be furnished either first motion or geared, and from 40 to 300 horse-power. Further particulars or information furnished on application.

Victor Air Compressor.

The Victor Electric Co., 55-61 Market street, Chicago, is manufacturing an air compressor which commends itself especially to medical practitioners. The outfit herewith illustrated is type No. 2, and consists of a single-action piston air pump with metallic ball valves operated by a Victor one-sixth-horse-power motor. These pumps will compress air up to eighty pounds, and are all tested at that pressure. The time required to fill the receiver ordinarily used by physicians to a working pressure is from three to five minutes.

The advantages of this outfit are obvious. It is convenient, cheap to operate and maintain, easily installed (all that is necessary to start it in operation is to plug in a lamp socket the same as an ordinary electric lamp), but its greatest superiority lies in the fact that it can be relied upon at all times to pump up any desired pressure in a very few minutes. The Victor pump is very quiet in operation, and is ordinarily placed directly in the operating room. It costs no more than an ordinary fan motor.

All wearing parts are extremely simple and durable. The only part that requires

classes of industrial and miscellaneous corporations, the securities of which are quotable in the financial markets of this country. The second annual number, just issued, with the title "Moody's Manual of Corporation Securities," contains a number of important improvements, some

of plumbago, facings and other supplies required for foundries and shops, as well as for the cranes and other equipment manufactured by the Whiting Foundry Equipment Co. He is now prepared to furnish all of the apparatus for iron, steel and brass foundries. His offices are



VICTOR AIR COMPRESSOR.

of them resulting from a consolidation with Moody's Manual of the Reference Book of American Gas and Electric-Light Securities, and the addition of a department of street-railway securities. There is also a section of special value to the banker and investor devoted to steam-railway securities, while a complete description of the United States public debt and details of leading foreign government securities, published in the first section of the volume, ought to be of special value in view of the expanding American interest in foreign loans.

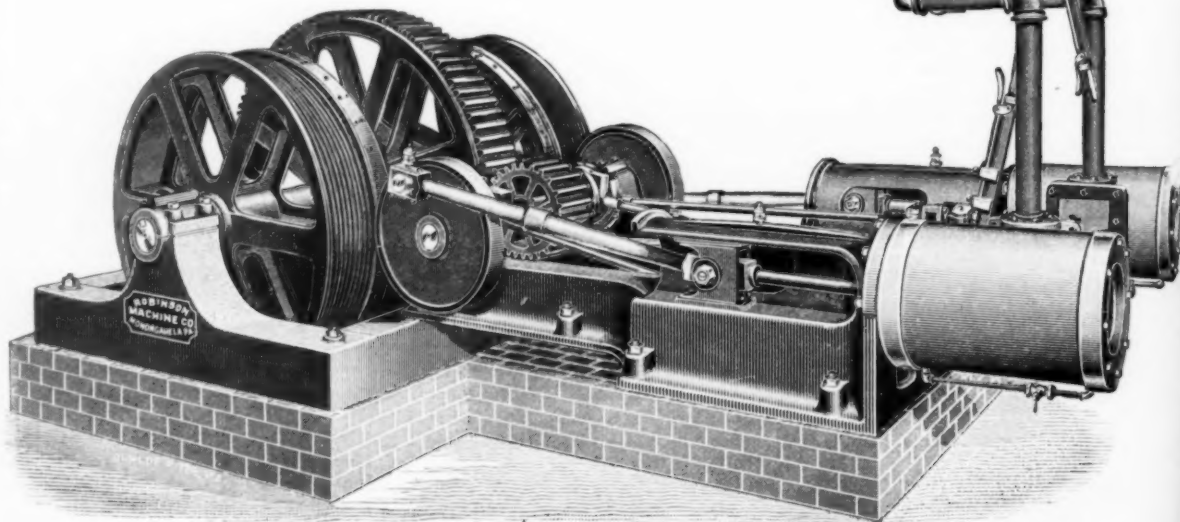
located in the Land and Title Building, Philadelphia, and at 39 Cortlandt street, New York.

Large Contract.

The Siegrist Lubricator Co. of St. Louis has secured a contract to install the Siegrist system of automatic lubrication in the plant of the Manhattan Railway Co. of New York. This plant represents 96,-

Moody's Manual.

One year ago John Moody & Co. of New York published the first annual num-



DOUBLE-DRUM TAIL-ROPE HAULAGE ENGINE.

Extended His Business.

Mr. Edward J. Etting announces that he has secured the agency of the S. Obermayer Co., the well-known manufacturer

600 horse-power. The Siegrist system is also being used in South Africa, and in the plant of the Glasgow Tramways Co. of Glasgow, Scotland, the largest of its kind in Great Britain.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Athens—Woodworking Factory.—J. W. Petty & Son of Aspen Hill, Tenn., will establish a factory for manufacturing sash, doors, blinds and barrels at Athens, as recently reported, and operate as the Athens Planing Mill Co.

Birmingham—Brick Plant.—W. P. Pinckard of De Bardeleben Coal & Coke Co. will establish a plant for making fire-brick at mines in Tuscaloosa county.

Birmingham—Steel Plant.—Republic Iron & Steel Co. states that it is making estimates and securing figures on proposed steel plant, which will be definitely decided in the next sixty days, and that no definite location has been selected. Company's principal offices are in Stock Exchange Building, Chicago.

Birmingham—Industrial Development.—Southern Industrial Co., reported during the week, has for its object the development of industrial enterprises, boring for oil and gas, mining asphalt, etc. Address Robert R. Zell, president.

Birmingham—Saw-mills, etc.—Clear Creek Lumber Co., recently reported as incorporated, has purchased large tracts of timber lands, and will develop same, constructing about six miles of railroad, erecting saw-mill, planing mills, etc. Address W. T. Dillon.

Birmingham—Land Company.—Booker City Land Co. has been incorporated, with capital stock of \$25,000, by J. W. Minor, H. M. Horton, E. B. Pennington and others to deal in real estate, etc.

Florence—Electric-light and Power Plant. M. C. Bauxbaum and associates have been granted franchise for erection of an electric-light, heat and power plant, and for construction of an electric street railway. It is said that \$1,000,000 will be invested.

Gadsden—Pipe Works.—W. S. Fletcher has been elected president, and J. H. Holcombe, secretary and treasurer, of the \$25,000 company reported recently to be organized for establishment of pipe works.

Lacy (not a postoffice)—Coal Mines.—Birmingham & Montevallo Coal Co. has been incorporated, with capital stock of \$25,000, for development of coal lands at Lacy, by John K. Smith, A. H. Smith and A. E. Wilson of

Blount, Ala., and Oscar Floyd of Birmingham.

Mobile—Machine Shops, etc.—Mobile, Jackson & Kansas City road has commenced work on contemplated improvements, a part of which was reported several months ago, and which include machine shops, round-house, car sheds, coal chute, office building, etc., to cost \$500,000; T. B. Merrill, president.

Riverton—Elevator.—Northern Alabama Railway will build a \$10,000 grain and freight elevator at Riverton.

Woodward—Furnace.—Woodward Iron Co. states that there is no truth in the recent report that it will build a new single furnace.

ARKANSAS.

Clarendon—Oil Wells.—Arkansas Oil Co., with capital stock of \$750,000, has been incorporated by W. L. Jefferies, president; J. B. Chapple, vice-president; M. J. Manning, secretary, and Geo. M. Chapin, treasurer.

Conway—Cotton Compress.—Arkansas Roundlap Bale Cotton Co. has been incorporated, with capital stock of \$20,000, by William Flanikn, secretary and treasurer; Paul Jones, president, and T. F. Hutchison.

Cornerstone—Lumber Company.—Gant-Barnes Lumber Co. has been incorporated, with capital stock of \$10,000, by W. R. Barnes, J. B. Gant and J. W. Gant.

Hamburg—Lumber Mill.—Ashley Lumber Manufacturing Co. has been incorporated, with capital stock of \$10,000, by J. H. Vonderbower, H. R. Severy and T. J. Busbridge.

Little Rock—Electric-light Plant.—City has awarded contract to the Fort Wayne (Ind.) Electrical Co. at \$19,700 for proposed enlargement of its plant, previously reported.

Marianna—Land and Zinc Mines, etc.—Arkansas & Missouri Mining Co. has been incorporated, as recently reported, for leasing and developing mineral lands; J. Ernest Jarrett, secretary.

Newport—Cotton Company.—Chartered: Murdock Cotton Co., with capital of \$200,000, by H. P. Murdock, president and manager; Henry Bordewell, vice-president, and J. G. Walker, secretary and treasurer.

Springdale—Water-works.—Municipal water-works system will be constructed, as recently reported. Address J. P. Deaner, secretary board of improvements.

FLORIDA.

Jacksonville—Knitting Mill.—Jacksonville Knitting Mills has equipped a \$30,000 plant to replace that burned recently; company will erect a new building three stories high, 60x110 feet, to be occupied next year. Plans have been accepted, but no contracts placed.

Laurel Hill—Syrup Mill.—M. A. Carlson, A. M. Soderlin and Fred Reynolds, all of Chicago, Ill., have purchased 1500 acres of lands at Laurel Hill which they will plant in sugar-cane and will erect a large syrup mill.

Marianna—Lighting.—City contemplates establishing system of electric lights. Address "The Mayor."

St. Marks—Saw-mill, etc.—Graham Cypress Co. has sold saw-mill, logging railroad and cypress timber to William L. Roach and associates of Muscatine, Iowa, who will enlarge the present plant to a capacity of 25,000,000 feet of lumber and 80,000,000 shingles per year.

Tampa—Cigar Factory.—O'Halloran & Co. will rebuild at once their cigar factory reported during the week as burned.

Tampa—Lighting.—John P. Martin & Co.'s bid for lighting the city has been accepted, and company will erect plant at once.

Tampa—Cigar Factory.—Bustillo Bros. & Diaz will erect a brick cigar-factory building to cost \$30,000.

GEORGIA.

Atlanta—Glass Works.—The Pittsburg Plate Glass Co. of Pittsburg, Pa., has leased building at 32 Pryor street, and will install therein a plant for manufacturing mirrors, bevel plates and leaded art glass. R. T. Conley of Milwaukee, Wis., will be appointed local manager.

Atlanta—Development Company.—Southern Development Co. has been incorporated, with capital stock of \$25,000, and privilege of increasing to \$500,000, by T. Y. Goodwyn, T. W. Loyless, L. Netherton and others for the development of timber and mineral lands and for the improvement of real estate.

Atlanta—Piano Company.—Chartered: Becht Piano Co., with capital stock of \$50,

000, and privilege of increasing to \$100,000, by R. P. Becht, Charles Becht and M. A. Shackelford.

Atlanta—Soap Factory.—Joseph Richardson, George D. Langston and others have incorporated the Florida Soap Co., with capital stock of \$25,000, and privilege of increasing to \$100,000.

Bethlehem—Wood-pulp Plant.—E. L. Thomas contemplates establishing a wood-pulp plant to be operated by water-power.*

Cedartown—Furniture Company.—McDonald-Brett Furniture Co. has amended its charter, changing name to the McDonald-Brown Furniture Co.

Columbus—Woodworking Factory.—F. J. Dudley of T. J. Dudley & Sons and T. U. Butts will organize and incorporate a company for establishing a large factory for manufacture of sash, doors, blinds and general woodwork; new company will absorb the two plants operated at present by the above parties.

Columbus—Bridge.—City has voted the issuance of the \$40,000 of bridge construction bonds recently reported. Address "The Mayor."

Columbus—Hardware Company.—Polk Harris, James Harris and A. B. Copeland have incorporated the Columbus Hardware Co., with capital stock of \$30,000.

Demorest—Woodworking Factory.—J. S. Adams & Sons have abandoned the idea of an electric-light plant, and will confine themselves to the manufacture of picker-sticks and other products of hickory and hardwoods.

Demorest—Electric-power Plant.—Edward Flox has purchased a water-power from J. S. Adams & Sons, and will develop same for electrical transmission of power.*

Jackson—Flour Mill.—S. C. McCandless will build a 25-barrel roller flour mill to be operated by water-power.*

Macon—Dairy.—C. M. Millirons will rebuild at once his dairy, reported burned.

Marietta—Knitting Mill.—Marietta Knitting Co. will add seventeen machines, increasing complement to 116.

Tifton—Hardware Company.—S. G. Slack and others have incorporated as S. G. Slack & Co., with capital stock of \$10,000, and privilege of increasing to \$50,000, for conducting general hardware business.

Toccoa—Woodworking Factory.—C. S. Treadwell of Chicago, Ill., is investigating with a view to establishing a factory for the manufacture of fruit and vegetable boxes in Toccoa.

Waycross—Machine Shops.—The Plant System will enlarge its shops at Waycross; R. G. Erwin, president, New York, N. Y.

KENTUCKY.

Ashland—Real Estate.—Chartered: Watson & Pritchard Real Estate Co., with capital stock of \$20,000, by D. G. Putnam, H. D. Watson and Kenton Pritchard.

Danville—Oil Wells.—Royal Oil Co., with capital stock of \$25,000, has been organized for development of 2500 acres of oil lands by James Denton, G. E. Wiseman, G. W. Welsh and others of Danville, and J. L. Andrews of Lima, Ohio.

Hustonsville—Oil Wells.—Chartered: Beaver Creek Oil Co., with capital stock of \$3000.

Louisville—Printing.—Chartered: Caxton Printing Co., with capital stock of \$5000, by Fred Levy, G. A. Brandt, Victor J. Binger and others.

Louisville—Rolling Mill.—Parties are in correspondence with the Commercial Club relative to the establishment of a rolling mill for the manufacture of sheet iron by a new process.

Murfreesville—Oil Wells.—W. B. Craddock, S. B. Buckner, Geo. D. Mentz, D. W. Whitman and others have organized a company for the development of 25,000 acres of oil lands in Hart, Grayson and Edmonson counties.

Owensboro—Chemical Company.—Owensboro Chemical Co. has been incorporated by Dr. J. P. Grantges, C. F. Scholl, R. J. McGhee, W. P. Pedley, P. R. Lancaster and others, for the manufacture of chemicals, etc.

Owensboro—Machine Shops.—W. F. Lees of Cannellton, Ind., and A. J. Daniels of Owensboro have incorporated the Lees Machine Works Co., with capital stock of \$25,000.

Paducah—Iron-ore Properties.—Hillman

Land & Iron Co. has filed articles of incorporation and completed its organization with John W. Harrison, president; E. H. Simmons, vice-president and treasurer, and Edward C. Simmons, general manager, all of St. Louis, Mo. Company will operate on an extensive scale an iron-ore property near Paducah, and will have blast furnaces and coke ovens in operation within thirty days. The property includes 70,000 acres of mineral land, and capital stock is \$1,000,000.

Sandersville—Distillery.—Kentucky Distilleries & Warehouse Co. will build a new distillery with capacity of about 2000 bushels per day.

Somerseset—Oil Wells.—Home Mutual Oil Co. has been incorporated, with capital stock of \$6000.

Winchester—Furniture Factory, etc.—J. L. Gorton has, with New York parties, purchased the Kinmore Furniture Factory, and will enlarge same, installing machinery for manufacture of wagon and carriage material. This item was reported last week under Winchester, Va., by mistake.

LOUISIANA.

Charenton—Oil Wells.—Chartered: Chetmachas Oil Co., Limited, with capital stock of \$500,000, by A. A. Bouvillian, president; A. C. Allen, vice-president; M. Bell, treasurer, and P. P. Perret, secretary; company has plant already established.

Jennings—Oil Wells.—Spring Hill Oil Co. has increased its capital stock from \$50,000 to \$200,000.

Lake Charles—Oil Wells.—Chartered: Pellcan Oil & Pipe Line Co., with authorized capital of \$500,000, of which \$225,000 has been subscribed; incorporators, J. S. Savage and W. A. Savage of West Virginia, R. M. Stanley of Ohio, G. W. House of Calcasieu, La., and others.

Monroe—Oil Wells.—Louisiana Oil & Development Co., Limited, has been incorporated, with A. F. Carmen, president; G. H. Glade, vice-president; W. C. Glenn, secretary; W. A. Corl, treasurer, and J. R. Hendricks, general manager; capital stock is \$1,000,000. Address manager at Joplin, Mo.

Natchitoches—Machine Shops and Cold-storage Warehouse.—Louisiana & Northwest Railroad will establish shops and cold-storage warehouse at Natchitoches; J. D. Beardsley, general manager, Gibsland, La.

New Orleans—Lighting.—Specifications and forms of proposals for lighting the city are being discussed by a special committee. Address "City Engineer."

New Orleans—Timber-land Development.—C. L. Gilland of Duluth, Minn., will purchase timber lands in Louisiana with a view to establishing mills for the manufacture of the finest grades of short-leaf Norway pine. He is registered at present at "The Grunewald," New Orleans.

New Orleans—Chewing-gum Factory.—W. J. White and S. P. Britton will, it is reported, establish a chewing-gum factory. Present address "St. Charles Hotel."

New Roads—Lighting Plant.—W. D. Austin has received contract for lighting the streets.

Ridgeland—Cotton Gin.—Ridgeland Milling & Manufacturing Co. will rebuild its cotton gin, reported burned at a loss of \$8000.

Ruston—Saw-mill.—J. M. & M. V. Davis will erect the saw-mill recently reported.

Ruston—Stave Factory.—J. E. Adams & Sons are erecting the stave factory recently reported.

Westwego—Warehouse.—Texas & Pacific Railway Co., L. S. Thorne, general manager, Dallas, Texas, will build an additional warehouse at Westwego in the near future, 500x200 feet, plans for which have not as yet been completed.

MARYLAND.

Baltimore—Mercantile.—Chartered: Progressive Mercantile Association, for dealing in real estate, etc., by Harry M. Webster and others.

Baltimore—Bulkhead.—Sanford & Brooks have received contract for constructing bulkhead at South street wharf, bids for which were recently asked.

Baltimore—Electric Company.—Chartered: Monarch Electric Co., with capital of \$3000, by Walter R. Carpenter, Raleigh T. Lilley, Frank M. Walton and others to manufacture electric, gas and water appliances.

Cumberland—Telephone Exchange.—De Warren H. Reynolds, Henry J. Glick, James A. McHenry, Carl C. Hetzel and others have

Incorporated the Western Maryland Telephone Co., with capital stock of \$100,000, for construction and operation of a telephone exchange.

Hurlock—Forge Company.—Hurlock Drop Forge Co. has been organized by Joseph B. Andrews, James L. Christopher, William M. Wright, Thomas I. Wright and others.

MISSISSIPPI.

Fayette—Water-works.—City has asked for bids on the construction of its water-works, reported recently as to be built at a cost of \$10,000. C. H. Jenks, Jackson, Miss., is engineer for the plant. Geo. V. D. Shober is town clerk.*

Harrison—Gin and Oil Mill.—Jefferson Gin and Oil Mill, with capital stock of \$15,000, has been incorporated by J. W. Frankenbush of New Orleans, La., and F. E. Nealis of Hammond, La.

Lux—Saw-mill, etc.—Eureka Lumber Co. has increased capital stock from \$30,000 to \$100,000, as recently reported; has purchased and will operate the plant of Eastabuchie Lumber Co.; will also erect a new mill of 75,000 feet daily capacity, expending about \$20,000; J. H. Stevens, Jr., vice-president.*

McComb—Mercantile.—Chartered: McComb City Mercantile Co., with capital stock of \$50,000, by J. J. White and others.

Meridian—Publishing.—Chartered: American Ginner and Cotton Reporter, with capital stock of \$100,000, by J. H. Duke, F. C. McGhee, C. P. Weatherbee and others.

Satartia—Transportation.—Chartered: People's Transportation Co., with capital of \$500, by J. R. Lacey, L. Kling, J. B. Taylor and others.

MISSOURI.

Higginsville—Wells.—Chartered: Higginsville Well Co., with capital of \$3000, by C. W. Hutcheson, Chas. Hofer, J. H. Burgan and others.

Joplin—Lead and Zinc Mines.—M. & B. Mining Co. has been incorporated, with capital stock of \$50,000, by E. D. Yoner, A. Coleman, J. A. Harman and others.

Joplin—Steel Company.—Bartlett Steel Co., with capital stock of \$50,000, has been incorporated by John L. Bartlett, Jerome B. Grigg, J. W. Harris and others.

Kansas City—Manufacturing.—Boone-Homaker Manufacturing Co., with capital stock of \$6000, has been incorporated by Samuel W. Boone, Henry G. Homaker and A. G. Boone.

Kirkwood—Water Supply.—Proposition has been made to furnish a water supply from the Meramec river, city to issue bonds to pay for laying mains, etc.; Geo. W. Taussig, chairman citizens' committee.

Mountain Grove—Telephone System.—Chartered: Wright Telephone Co., with capital stock of \$2500, by J. H. Medley, J. F. McComb, W. E. McComb and others.

Springfield—Iron Works.—Chartered: Sterling Iron Works, with capital stock of \$50,000, by H. C. Mosher, H. T. Hornsby, R. P. Boyer and others.

St. Louis—Machine Company.—Lewis Blind Stitch Machine Co. has been incorporated, with capital stock of \$125,000, by John G. Lewis, William L. Nichols and Chas. L. Knower.

St. Louis—Mining.—Chartered: Big River Mining Co., with capital stock of \$400,000, by Gustav Miller and others.

St. Louis—Carriage Company.—Moon Bros. Carriage Co. has increased its capital stock from \$150,000 to \$200,000.

St. Louis—Improvement Company.—Eastern Improvement Co., with capital of \$3000, by H. M. Pollard, William Schimmel and J. H. Saell.

St. Louis—Plumbing, etc.—Chartered: A. H. Clark Plumbing & Hardware Co., with capital of \$3000, by M. J. Cleary, A. H. Cleary and C. F. Bauer.

St. Louis—Security Company.—Security Co. of North America has been incorporated, with capital stock of \$50,000, by S. Clark, W. C. Cluff and C. H. Cluff.

St. Louis—Realty.—Chartered: Pomeray Realty Co., with capital stock of \$2000, by S. Pomeray, A. M. Pomeray and others.

St. Louis—Manufacturing.—Chartered: Hill Electrical Manufacturing Co., with capital stock of \$25,000, by Harry M. Hill, W. P. Foster and Mortan Jordan.

St. Louis—Game and Produce Company.—Fulton Game & Produce Co. has been incorporated, with capital stock of \$5000, by David Younger, A. J. Ratz and A. Townsend.

St. Louis—Development Company.—Shutter-Tuttle Development Co. has increased its capital stock from \$5000 to \$10,000.

St. Louis—Quarry.—Brentwood Quarry & Construction Co. has been incorporated, with capital stock of \$6000, by P. W. Schneider,

Jr., G. D. Rosenthal, William Hand and others.

Webster Groves—Electric-power Plant.—St. Louis Electric, Construction & Maintenance Co., 1216 Washington avenue, St. Louis, Mo., has leased and will improve the plant of the Suburban Electric Light & Power Co. at Webster Groves.

NORTH CAROLINA.

Albemarle—Furniture Factory.—Albemarle Furniture Co. has awarded contract to O. P. Howard for erection of its proposed factory building, which will be two stories, 50x80 feet, with additional engine rooms.

Andrews—Electric-light Plant.—F. P. Cover & Son contemplate installing an electric-light plant and extending wires to Murphy, a distance of sixteen miles.*

Andrews—Corundum Mine.—North Carolina Corundum Co. is developing a mine near Andrews.

Charlotte—Homes Company.—Chartered: Millerton Homes Co., with capital stock of \$30,000, by R. M. Miller, John W. Miller and others.

Durham—Gas Plant.—Col. A. H. Leftwich of Baltimore, Md., and associates are reported as investigating with a view to establishing a gas plant in Durham.

Elizabeth City.—Chartered: Albemarle Agricultural and Fish Fair, with capital stock of \$10,000, by Walter L. Cohoon and others.

Elm City—Mercantile.—Chartered: Tolson Grocery Co., with capital stock of \$10,000, by John D. Dawes and others.

Goldsboro—Hardwood Factory.—J. H. Weedon will remove his hardwood factory from Marion, S. C., to Greensboro.

Hamlet—Electric-light Plant and Water-works.—G. O. Sanders, reported recently to erect electric-light plant and water-works at Hamlet, may be addressed at Pine Bluff, N. C., or 89 State street, Boston, Mass.*

High Point—Water-works and Sewerage.—City will hold an election November 9 to decide issuance of \$50,000 of water-works and sewerage bonds. Address "The Mayor."

Kernersville—Knitting Mill.—W. H. Leak will establish a knitting mill.

Kernersville—Knitting Mill.—J. M. Greenfield will establish a knitting mill; machinery purchased.

Leaksville—Buggy Company.—Chartered: J. H. Hampton Buggy Co., with capital stock of \$10,000, by D. F. Kling, J. N. Ivie, J. M. Hooper and S. L. Martin.

Louisburg—Sewerage and Water-works.—It has been decided affirmatively to issue \$30,000 of bonds for water-works and sewerage, previously reported. Address "The Mayor."

New Berne—Electric-light Plant.—City will vote on December 3 on the issuance of \$15,000 of bonds for electric-light plant. Address "The Mayor."

New Berne—Hosiery Mill.—Southern Hosiery Mill has been incorporated, with capital stock of \$125,000, by T. W. Dewey, M. M. Marks, P. H. Pelletier and others, for the manufacture of hosiery, underwear, knit goods, etc. P. H. Pelletier owns Clermont Mills, and was reported previously as to form company to enlarge plant.

Raleigh—Jewelry Company.—Jolly & Wynne Jewelry Co. (established) has been incorporated, with B. R. Jolly, president; J. S. Wynne, vice-president; Frank M. Jolly, secretary.

Shelby—Laundry.—Rudisill & Willson are establishing a steam laundry.

Tarboro—Knitting Mill.—Runnymede Hosiery Mills will install a dyeing plant.

Troy—Cotton Mill.—Smitherman Cotton Mills is reported as to install 100 looms; now operates spindles only (3328).

Yancey County—Graphite Mines.—John Arthur Farwell of Chicago, Ill., is interested in the development of graphite mines in North Carolina (as recently reported), and the National Graphite Co. will be organized, with capital stock of \$3,000,000.

Washington—Lumber Mill.—Croatan Lumber Co., with authorized capital of \$10,000, has been incorporated by Vernon W. Long, Lake City, Fla.; Frank C. Kugler, Washington; Stephen Bragaw, Washington, and others, for erection of large lumber mill.

Winston—Iron-bed Company.—Chartered: Forsyth Iron Bed Co., with authorized capital of \$125,000, by Henry E. Fries, W. A. Blair, Huntley Hill and others.

SOUTH CAROLINA.

Batesburg—Electric Plant, Water-works and Street Improvements.—City has taken new charter, as recently reported, for the purpose of general improvements, which include electric-light plant, construction of

water-works and street improvements; M. B. Edwards, city treasurer.

Blacksburg—Cotton Mill.—Cherokee Falls Manufacturing Co. has let contract to R. F. Rankin for erection of 100x104-foot addition to cotton mill, three stories high; now has 15,500 spindles and 548 looms.

Charleston—Bakery.—O. G. Marjenhoff will enlarge his bakery by erection of a two-story brick building 110x40 feet, to be equipped with the latest improved machinery.

Columbia—Dairy and Stock Farm.—J. Q. Marshall and B. L. Abney have incorporated the Columbia Stock & Dairy Co., with capital of \$10,000, for conducting a stock farm and dairy.

Greenville—Bobbin and Shuttle Factory.—Mallard Lumber & Bobbin Co. has been incorporated, with capital stock of \$50,000, by James L. Orr, J. W. Gagle and E. G. Mallard.

Mullins—Building Company.—Mullins Building Co. has been incorporated, with capital stock of \$5000, by W. H. Daniel, president; G. H. Yarbors, vice-president, and M. M. Boyd, secretary and treasurer.

Parkville—Cotton Mill.—The Twin City Power Co. proposes erecting a cotton mill to utilize the power it has developed.

Spartanburg—Cigar Factory.—John H. Fahry and John Hardy of Beaverdam, Wis., will establish cigar factory at Spartanburg.

Union—Drug Company.—Palmetto Drug Co. has been incorporated, with capital of \$2000, by L. L. Linder, J. D. Timmons and W. L. Linder.

TENNESSEE.

Bristol—Spoke Factory.—Harriman Spoke & Hub Co. will remove its plant from Harriman to Bristol, as recently reported, and will operate under the name of Beveridge & Taylor in the manufacture of spokes only.

Brownsville—Woolen Mill.—Wm. W. Campbell, J. W. Bryan, C. E. Bruce and others have incorporated the Hatchie Manufacturing Co., with capital stock of \$12,000, for manufacturing woolen goods.

Chattanooga—Cigar Factory.—E. B. Tisher of Wheeling, W. Va., will establish a cigar factory at Chattanooga.

Chattanooga—Manufacture.—E. W. Watts of Greenfield, Ohio, is investigating with a view of establishing a manufacturing enterprise in Chattanooga.

Chattanooga—Saw-mill.—Loomis & Hart Manufacturing Co. will rebuild at once its saw-mill, recently reported burned; capacity will be 50,000 feet per day; company will also install electric-light plant for lighting its mill and grounds; cost of new mill about \$12,000.*

Clarksville—Tobacco Company.—The tobacco firms of T. D. Luckett and Frank G. Wake will consolidate and operate, under the name of the Luckett-Wake Tobacco Co., several factories in different Kentucky towns.

Jacksonboro—Coal Mines.—Blue Gem Coal Co. has been incorporated, with capital stock of \$100,000, by J. W. Bernheim, Samuel Grubfelder, H. Kaufman, L. A. Gratz and others.

Knoxville—Cotton Mill.—It is reported that Brookside Mills will install 100 additional looms and other machinery; now has 26,000 spindles and 650 looms.

Nashville—Coal Mines, Coke Ovens and Woodworking Factory.—Wm. H. McKinley, C. E. Hutchison, A. B. McDonald, John H. McMillin and others have incorporated the Northern Tennessee Coal & Lumber Co., with capital stock of \$100,000, and privilege of increasing to \$1,000,000, for mining coal and manufacturing coke, spokes and handles.

TEXAS.

Alma—Gin.—Ben Whitfill will rebuild his \$12,000 gin, recently reported burned.

Alvin—Box Factory, etc.—W. E. Davis & Co. have established a box factory and woodyard.

Austin—Water-works and Electric Plant.—The city has purchased the plant of the Austin Water, Light & Power Co. Address "The Mayor."

Austin—Sugar Mill.—The legislature has authorized the expenditure of between \$150,000 and \$200,000 for erection of a sugar mill. Address "Financial Agent of Penitentiary."

Bay City—Canals.—Chartered: Herder Canal Co., with capital stock of \$50,000, to construct and operate dams, canals, lakes, reservoirs, etc., by George Herder, N. M. Vogelsang and George Seydler.

Beaumont—Oil Wells.—Jumbo Oil Co., with capital stock of \$500,000, has been incorporated by C. A. Bradley, T. D. Winders, E. L. Bradley and others.

Beaumont—Oil Wells.—Chartered: Beaumont Associated Oil Wells Co., with capital stock of \$100,000, by E. A. Noonan, J. A.

Reardon, Charles Evans, J. H. Conover and others, all of St. Louis, Mo.

Beaumont—Cotton Mill.—C. W. Howth is endeavoring to organize a \$100,000 stock company for establishment of a cotton mill.

Beaumont—Oil Wells.—G. M. Canterbury, C. M. Baldwin, R. M. Snyder of Kansas City, Mo.; R. H. Adair, J. L. Hudson and E. L. Lappington of Beaumont are the incorporators of the British-American Oil Co., reported last week.

Beaumont—Telephone Company.—Beaumont-Northwestern Telephone Co. has been incorporated, with capital stock of \$10,000, by J. M. Smith, W. S. Bruce and others.

Beaumont—Woodworking Factory.—Geo. L. Jackson and G. R. Tifal have organized the Jackson & Tifal Manufacturing Co. to establish a plant to manufacture sash, doors, blinds and interior finishings.

Beaumont—Storage Tanks, etc.—Mississippi & Texas Oil Co. will construct wharf and large storage tanks for loading oil into vessels.

Big Springs—Mercantile.—Chartered: Matthews-Walcott Company, with capital stock of \$50,000, by R. D. Matthews and others.

Claude—Land and Cattle Company.—Chartered: Andrews & Hunter Land & Cattle Co., with capital stock of \$50,000, by C. A. Andrews, L. T. Andrews and others.

Dallas—Gas-burner Company.—Residue Crude Oil Gas Burner Co., with capital stock of \$125,000, has been incorporated to manufacture generators and burners, by J. M. O'Neill, R. L. Spann and O. F. Ansley.

Dallas—Knitting Mill.—E. J. Klest, Philip Sanger and A. P. Tenson will endeavor to organize a \$25,000 company to establish the knitting mill lately reported as proposed.

Denton—Oil-fuel Plant.—Denton Water, Light & Power Co. will use petroleum as fuel.

El Paso—Mining, etc.—Chartered: San Vincente Mining & Milling Co., with capital stock of \$50,000, by W. W. Turney, B. F. Hammet and W. B. Latta.

El Paso—Machinery Company.—B. L. Berkey Machinery Co. has been incorporated, with capital stock of \$30,000, by B. L. Berkey, C. M. Berkey and David D. Miller.

Fort Worth—Packing Plants.—The citizens of Fort Worth have raised the necessary \$100,000 to secure the location of the packing plants to be erected by Armour and Swift, mention of which has previously been made; cost of two plants will be \$2,500,000.

Fort Worth—Oil Wells.—Southern Oil & Pipe Co., with capital stock of \$10,000, has been incorporated by L. E. Standifer, C. A. Standifer and C. P. Brewer.

Houston—Electric-light Plant.—Citizens' Electric Light Co., W. W. Chapman, general manager, will expend \$150,000 in enlargements and improvements to its plant.

Indianola—Telephone System.—The Indianola Telegraph & Telephone Co., reported during the week as incorporated with capital stock of \$500,000, has its principal office in Sherman, Texas, and the incorporators include J. E. Boynton, J. B. Earle and M. D. Shaw.

Llano—Realty Company.—Chartered: Llano Realty Co., with capital stock of \$50,000, by M. V. Dittlinger, N. J. Badu and Jeff McLeMORE.

Llano—Iron-ore Mines.—A company with \$1,000,000 capital is being formed for operating in the Llano iron fields, operating smelting works, etc. R. A. Greer of Beaumont is said to be interested.

Marshall—Woodworking Factory.—Lancaster Manufacturing Co. has been incorporated, with capital stock of \$10,000, to manufacture all kinds of wood products, by C. D. Lancaster, R. B. Lancaster and N. Gaffney.

Orange—Iron Works.—Orange Iron Works will enlarge by erection of an addition and installation of machinery (as recently reported) for the manufacture of box and flat cars.

San Antonio—Oil Wells.—Chartered: King Crowther Corporation, with capital stock of \$3,000,000, to prospect for oil and minerals, by Samuel Crowther, Atascosa county; W. F. Moore of Waco, John Findlater of San Antonio and others.

Stephenville—Cotton Mill.—James Collins proposes organizing the Stephenville Cotton Mill Co., with capital stock of \$100,000, to build a cotton factory.

Warren—Saw and Lumber Mill.—Texas Yellow Pine Lumber Co. will erect a \$57,000 saw and lumber mill to replace one recently reported burned.

VIRGINIA.

Lexington—Telephone System.—J. B. Curtis of Wall street, New York, has purchased the Long Distance Telephone Co. of Virginia

and reorganized same with J. R. Kemper, president; G. A. Guley, secretary, and N. C. Watts, general manager and treasurer; new company will build lines to cover the entire State of Virginia.

Martinsville—Electric-light Plant.—Proposition has been made for organization of a company to establish a system of electric lights. Address "The Mayor."

Martinsville—Sewerage.—City engineer has made estimates on extension of the sewerage system; cost \$5026; bonds will probably be issued. Address "The Mayor."

Norfolk—Mercantile.—Chartered: Adolph Brandt Co., with capital of from \$1000 to \$5000, by Harry M. Brandt and others.

Norfolk—Silk Mill.—Norfolk Silk Mill Co. will enlarge and improve its mill.

Richmond—Beehive Power Plant.—Richmond Industrial Development Co. (reported recently) has awarded contract to J. T. Wilson for erection of its proposed building, which will be four stories, of brick, 50x150 feet, and cost \$35,000.

Richmond—Electric-power Plant.—Virginia Electrical Railway & Development Co. will expend \$200,000 in doubling capacity of its plant; improvements include erection of new building and installation of new machinery.

Richmond—Shoe and Heel Plate Works.—Chartered: Crescent Shoe & Heel Plate Works, to manufacture machinery for making footwear, etc., with capital stock of from \$3000 to \$10,000, by Emmett W. Thomas, president; A. G. Spratley, vice-president, and R. C. Nelson, secretary and treasurer.

Sharps—Barrel Factory.—Jas. W. Barker has established a factory for the manufacture of oyster and truck packages, as recently reported, and will operate under the name of the Rappahannock Barrel Co.

Stephen City—Barrel Factory.—M. J. Grove Lime Co. will rebuild its burned cooper shop; capacity to be from 800 to 1000 barrels per day.

Suffolk—Cornmeal Mill.—Barton & Jeffries will erect cornmeal mill with steel storage warehouses, etc.

WEST VIRGINIA.

Charleston—Coal Mines.—Kanawha & Hocking Co. has purchased complete electrical equipment for its mines, including five complete electric-power plants.

Charleston—Oil and Gas Lands.—Southern West Virginia Oil Co., with capital stock of \$50,000, has been incorporated for developing oil and gas lands by Fred Paul Grosscup of Charleston, Ainsworth Clark, E. G. Rice, Geo. A. Farger and others of Chicago, Ill.

Charleston—Coal Mines.—Chartered: Kanawha & Coal River Coal Co., with capital stock of \$500,000, by David A. Nease of New York city, Edward W. Knight, R. E. Haines and V. T. Black of Charleston.

Clay—Bridge.—Clay county will hold an election on October 26 to decide issuance of \$27,000 of bonds for construction of a bridge across Elk river. Address "County Clerk."

Fairmont—Water-works and Sewerage.—City will hold an election to decide the issuance of \$35,000 of bonds for improving its water-works and \$25,000 for sewerage purposes. Address "The Mayor."

Huntington—Coal and Timber Developments.—It is reported that French capitalists have purchased (from Lincoln Land Association) 110,000 acres of coal and timber lands in Lincoln county, and will expend \$1,000,000 in developments. J. X. Hill of Western Kanawha Coal Co. is said to have completed the sale.

Morgantown—Timber Lands.—H. S. Hutson and J. L. Kendall, reported last week to purchase and develop timber lands near Morgantown, are of Connellsville, Pa.

Nicholas County—Coal Mines, Coke Ovens, etc.—Dr. W. J. Jones and Sylvanus Jones of Readyville, Ohio; William Campbell of Charleston, W. Va.; Lewis Spafford of Toledo, Ohio, and J. W. Long of Florida, Ohio, have leased 4000 acres of coal lands on the Bell fork of the Gauley river in Nicholas county and will develop same on an extensive scale, opening mines, constructing coke ovens and locating several other industries.

Wheeling—Glass Works.—Central Glass Works, reported burned at a loss of \$50,000, will be rebuilt.

INDIAN TERRITORY.

Davis—Cotton Mill.—Indianola Cotton Mills, with capital stock of \$300,000, will be organized to establish the plant recently reported; 23,000 spindles and 750 looms will be installed, to be removed from a Wisconsin factory. J. H. Christian, manager of Croslen Manufacturing Co. at 119 La Salle street, Chicago, is interested.

Indian Territory—Coal Mines.—Fort Smith

& Western Railroad will be organized by H. C. Frick, A. W. and R. B. Mellon for construction of twenty miles of railroad and to develop coal properties in Indian Territory, output of which is expected to reach 300,000 tons a year.

OKLAHOMA TERRITORY.

Lawton—Oil Wells.—C. W. Arnold, 2211 Postoffice street, Galveston, Texas, is interested in the development of oil lands in Lawton, as recently reported, and will sink a test well of about 100 feet about January 1; has not purchased any machinery as yet.

BURNED.

Andalusia, Ala.—Morrison & Williamson's turpentine plant.

Birmingham, Ala.—Lockwood Manufacturing Co.'s furniture factory; estimated loss \$10,000.

Bowie, Ky.—Bowie Lumber Co.'s dry-kilns; estimated loss \$45,000.

Carolina City, N. C.—Oaksmith & Watson's saw-mill; loss \$1500.

Chester, S. C.—Nicholson Hotel; loss \$15,000; Mrs. Cunningham, proprietor.

Elliott, Texas.—Elliott Grist Mill and Gln; loss \$1000.

Harwood, Texas.—Joseph Taylor's cotton gin; loss \$3000.

Josserand, Texas.—Josserand Lumber Co.'s dry-kilns.

New Roads, La.—W. P. Ramsey's cotton gin.

Queenstown, Md.—J. A. Wright's cannery; loss about \$3500.

Shelbyville, Tenn.—G. W. Ransom & Co.'s hub and spoke factory; loss about \$15,000.

Shreveport, La.—Shreveport Compress & Warehouse Co.'s warehouse damaged to extent of \$3000.

Stephen City, Va.—M. J. Grove Lime Co.'s plant; loss \$5000.

Sylacauga, Ala.—Lane Bros.' cotton warehouse.

Wheeling, W. Va.—Central Glass Co.'s plant; estimated loss \$50,000.

BUILDING NOTES.

Andrews, N. C.—Hotel.—Stephen Porter contemplates erecting a hotel.*

Atlanta, Ga.—Buildings.—Permits for following buildings have been issued: Pratt Laboratory to add another story to its building, to cost \$2000; H. C. Jackson for three two-story frame dwellings, to cost \$10,000, and Mrs. L. H. Daniel for four two-story frame dwellings, to cost \$8000.

Baltimore, Md.—Dwellings.—Randolph Forrester will erect fourteen three-story brick and stone dwellings to cost \$30,000.

Baltimore, Md.—Stores Building.—Brotherhood Supply Co. is being organized for erection of a large stores building at North and Maryland avenues. Edward H. Glidden will prepare the plans. Address George H. Nitzel, 2840 Huntingdon avenue.

Birmingham, Ala.—Hotel.—It is reported that W. H. Woodward contemplates the erection of a 12-story hotel building.

Birmingham, Ala.—Jail.—Stockmar & Co. have received contract at \$14,000 for remodeling the old city jail.

Charlotte, N. C.—Residence.—H. G. Chatman has purchased site at \$4000, and will erect residence.

Chattanooga, Tenn.—Dwellings.—Dr. A. J. Love will build two two-story dwellings to cost \$5000.

Clarksville, Tenn.—Hotel.—Franklin House Hotel Co. has been incorporated by Clay Stacker, E. B. Ely, J. C. Kendrick, D. S. Bloch and others for purchasing, improving and operating the Franklin House.

Clay, W. Va.—Courthouse.—Clay county will hold an election on October 26 to decide the issuance of \$18,000 of bonds for erection of new courthouse. Address "County Clerk."

Clayton, N. C.—School.—Clayton School Co. has been incorporated, with authorized capital of \$10,000, for building and maintaining a school, by Ashley Horne, J. E. Page and others.

Columbia, S. C.—Residence.—Frank P. Milburn is preparing plans for \$6000 residence for W. Boyd Evans.

Columbus, Ga.—Church.—St. Paul's congregation will build a new church to cost \$40,000. Address "The Pastor."

Dallas, Texas—Bank Building.—Dallas Loan & Trust Co. will erect a \$10,000 building.

Denison, Texas—Roundhouse.—Missouri, Kansas & Texas Railway Co. will rebuild its roundhouse at Denison; new building to be

of brick, iron and steel, with capacity of thirty-three stalls; A. A. Allen, general manager, St. Louis, Mo.

El Paso, Texas—Business Block.—Judge C. N. Buckler will erect a four-story business block 131x120 feet.

Eureka Springs, Ark.—Office Building.—Contract has been awarded to B. J. Rosewater and C. F. Ellis for erection of a federal or postoffice building, four stories, to cost \$15,000.

Fayetteville, W. Va.—Building.—L. A. Pine and C. P. Phillips have received contract at \$5400 for erection of the Beckley Seminary; building will be three stories, 60x60 feet.

Gainesville, Ga.—Dwelling.—J. J. Camp will erect a dwelling.

Greenville, Ga.—Courthouse.—Bids are asked until November 22 for building new courthouse; L. A. Allen, chairman county commissioners.

Jacksonville, Fla.—Building.—T. J. Darling of Waycross has contract for erection at Jacksonville of a five-story building to cost \$75,000 for the Dyall-Upchurch Company.

Jacksonville, Fla.—Club.—Jacksonville Wheelmen, Geo. L. Bahl, president, is having plans made by Holmes & Lawton for erection of proposed building 36x105 feet, to cost \$6000.

Marshallberg, N. C.—Academy.—New building to cost \$25,000 will be erected at Graham Academy; Rev. C. M. Levister, principal.

Martin, Tenn.—School.—City will hold an election in November to determine the issuance of bonds for erection of school building. Address "The Mayor."

Martinsburg, W. Va.—A three-story brick building 26x50 feet will be erected for use by the W. H. Helston Construction Co.

Meridian, Miss.—Jail.—Lauderdale county will issue \$30,000 of bonds for erection of its new jail, plans and specifications of which have been accepted, as recently noted.

New Iberia, La.—Jail.—L. T. Hayes of Houston, Texas, has received contract at \$19,000 for erection of proposed jail at New Iberia.

New Berne, N. C.—Building.—Dr. F. W. Hughes will erect a one-story brick building.

Pensacola, Fla.—Laundry Building.—Star Laundry Co. has let contract to C. H. Turner for erection of new building.

Spray, N. C.—Hotel.—Spray Hotel Co., with capital stock of \$10,000, which may be increased to \$125,000, has been incorporated by J. S. Patton, C. P. Wall and R. P. Ray.

St. Louis, Mo.—Office Building.—Missouri Trust Co. is said to be contemplating the erection of an eight-story office building.

St. Louis, Mo.—Building.—Chartered: Fair Building Co., with capital stock of \$10,000, by William Hambuley, August Peterson and others.

St. Louis, Mo.—Warehouse.—Philebert-Johanning Planing Mill Co. is erecting a two-story warehouse 250x135 feet to cost \$50,000.

Swainsboro, Ga.—School.—City will hold an election November 4 on the issuance of \$12,000 of bonds for erection of school. Address "The Mayor."

Thomaston, Ga.—Depot.—Macon & Birmingham Railroad will erect new depot at Thomaston; Julian R. Lane, general manager, Macon, Ga.

Valdosta, Ga.—Hotel.—Valdosta Hotel Co. has awarded contract for erection of its proposed \$45,000 hotel building.

Washington, D. C.—Church.—Grace Reformed congregation contemplates erection of a new church to cost \$35,000. Address "The Pastor."

Washington, D. C.—College.—H. B. F. Macfarland, J. W. Ross and L. H. Beach, commissioners District of Columbia, will open bids November 9 for constructing a four-room school building for Industrial Home School. Blank forms and all necessary information on application to "Inspector of Buildings." Usual rights reserved.

Washington, Ga.—Residence.—James R. Benson has had plans made by J. W. Golucke & Co. of Atlanta, Ga., for a brick dwelling, two stories, 80x70 feet, to have steam heat, electric fixtures, etc.

Wytheville, Va.—Stores Building.—Mrs. W. O. Moore and Miss Helen Taylor have awarded contract for erection of brick and stone stores building 75x100 feet.

Durable Material.—The hydraulic rock cement manufactured by the Chickamauga Cement Co. of Rossville, Ga., is noted for its durable qualities. The Southeastern Lime & Cement Co. of Charleston, S. C., the Southern distributing agent, will be pleased to correspond with inquirers who may desire to use it.

RAILROAD CONSTRUCTION.

Railways.

Bainbridge, Ga.—C. H. Caldwell, president of the Bainbridge Northern Railway Co., writes the Manufacturers' Record that the company will construct a branch five miles in length to the property of the Flint River Lumber Co. All of the necessary equipment has been purchased.

Bakersville, N. C.—It is reported that Mitchell county has voted in favor of issuing \$100,000 bonds to aid what is known as the South & West Railroad Co., which is promoting a line in North Carolina to terminate at Southport. It is stated that the Pinola Lumber Co. is interested in the project.

Bartow, Fla.—It is announced that the Bartow & Plant City Railway Co. has been reorganized by the election of Clarence A. Boswell as president; George E. Simpson, secretary, and E. C. Stuart as general manager. It is understood that the company proposes building between these towns, an estimated distance of twenty miles.

Birmingham, Ala.—The Clear Creek Lumber Co. of Birmingham has decided to build a standard-gauge railroad about six miles in length to connect its timber lands with the Louisville & Nashville system. W. G. Robinson at Birmingham is president of the company.

Corona, Ala.—It is stated that arrangements are being made to construct a branch of the Kansas City, Memphis & Birmingham division of the St. Louis & San Francisco system to the property of the Corona Coal & Iron Co. L. B. Musgrove is general manager of the Corona Company, and C. D. Perdon of St. Louis, chief engineer of the St. Louis & San Francisco.

Cumberland, Md.—The latest report concerning the electric railroad being built between Cumberland and Frostburg is to the effect that it will be ready for operation by January 1. The Penn State Construction Co. is the contractor. J. W. Burchinal of Moundsville, W. Va., is one of the principal promoters.

Decatur, Ala.—Preliminary surveys, it is reported, are being made in the interest of the Central of Alabama Railroad, being promoted between Decatur and Jasper, a distance of seventy-six miles. A connection will be made with the St. Louis & San Francisco system. Among those interested are John Carlisle of Cincinnati, Ohio, and F. J. O'Connor of Chattanooga, Tenn.

Dothan, Ala.—The latest report concerning the Dothan, Hartford & Florida Railroad, projected between Dothan and St. Joseph, Fla., on the Gulf coast, is to the effect that all contracts have been let, and that it is to be constructed within the next year. It is reported that bonds to the extent of \$1,500,000 have been floated in the interest of the enterprise. The president of the company is J. P. Pelham at Dothan.

Elko, Va.—A plan is being agitated to construct an electric railroad between Elko and Malvern Hill.

Ensley, Ala.—The latest report concerning the Warrior Southern Railroad is to the effect that construction will begin immediately, and that the line will form a portion of a new route between Birmingham and the Mobile & Ohio division of the Southern. Vice-Presidents W. W. Finley and A. B. Andrews of the Southern are directors of the new company, and Mr. Andrews has been elected president. W. H. Wells at Washington is engineer.

Florence, Ala.—M. C. Buxbaum and others have secured a charter to build an electric line in Florence, which may extend to Sheffield and Tusculum.

Gainesville, Fla.—J. N. Graham of Gainesville has been elected president, and L. E. Barker, general manager, of the Gainesville & Gulf Railroad, now in operation between Sampson City and Fairfield, Fla., a distance of forty-eight miles. It is reported that the road is to be extended further from its present northern terminus.

Galveston, Texas.—The United States authorities are considering the construction of a railroad to the fortifications near Galveston harbor. S. B. Riche is engineer in charge.

Gauley Junction, W. Va.—It is stated that Ohio and West Virginia parties interested in coal lands near Gauley Junction will construct a railroad about three miles long to connect with the Chesapeake & Ohio system. Among those interested are W. J. Jones of Readyville, Ohio, and William Campbell of Charleston, W. Va.

Georgetown, Ky.—It is reported that the Interurban Electric Railway Co., building the trolley system between Georgetown and Lexington, has purchased the necessary roll-

ing stock, and that tracklaying is to begin immediately. The road will be twelve miles in length. Younger Alexander of Brooksville, Ky., is president of the company.

Gladwin, W. Va.—T. W. Raine, manager of the Raine-Andrews Lumber Co., writes the Manufacturers' Record that the company is constructing a standard-gauge road from Gladwin to Flint's Station. About seven miles have been graded, and tracklaying is in progress. The line will connect the Dry Fork Railroad with the Coal & Iron division of the West Virginia Central system.

Greenville, Fla.—J. W. Oglesby, president of the South Georgia Railroad Co., advises the Manufacturers' Record that the company now has fifty-one miles in operation between Hartline, Ga., and Greenville, and has graded ten miles south from Greenville, and that it intends to make the ultimate terminus of the road at Tampa, Fla. He may be addressed at Quitman, Ga.

Harrisonburg, Va.—The Chesapeake & Western Railway Co. has filed a mortgage to secure a bond issue for \$1,435,000 to the Bowling Green Trust Co. of New York. It is stated that the bonds will finance the proposed extension into West Virginia, and to a point on the Potomac or York river in Tidewater Virginia. De Witt Smith, 141 Broadway, New York, is president of the company.

Jasper, Texas.—About twenty miles of the extension of the Gulf, Beaumont & Northern Railroad have been graded from Jasper north, and nine miles of track laid. The extension will terminate at San Augustine. The Gulf, Beaumont & Northern is a division of the Gulf, Colorado & Santa Fe system, of which L. J. Polk at Galveston is general manager.

Joplin, Mo.—It is stated that the extension of the Southwest Missouri Electric Railway from Joplin to Pittsburg, Kan., will be taken up in the near future with a view to completing it as soon as possible. A. H. Rogers is president of the company.

Kansas City, Mo.—J. L. Brown, one of the promoters of the Kansas City, Parkeville & St. Joseph Electric Railway, writes the Manufacturers' Record that it is expected to begin construction as soon as franchises are secured in Platte and Clay counties. These will probably be obtained within the next thirty days.

Kirkwood, Mo.—The St. Louis, Kirkwood & Manchester Railroad Co. has been incorporated, with \$250,000 capital stock, to build a road between St. Louis and the towns mentioned through St. Louis county. Among those interested are D. C. Taylor of Manchester and John M. Berry of Windom, Mo.

Laurel, Miss.—The Tullahoma & Western Railway Co. has been incorporated to build from Laurel to Raleigh, in Smith county. L. C. Clinton of Eastman, Iowa, and G. S. Gardiner of Laurel are among the promoters.

Marshall, Texas.—The business men of Marshall have decided to offer inducements to the Texas Southern Railroad Co. to extend to Marshall, and have appointed a committee to take up the matter.

Memphis, Tenn.—It is announced that the Union Railway Co. has decided to build the Belt Line, which has been under consideration for some time, with a view to completing it within the next year. H. L. Brinkley is president of the company.

Mobile, Ala.—The Mobile, Jackson & Kansas City Railroad Co. has graded eighteen miles of the extension between Merrill and Hattiesburg, Miss., and it is reported that surveys are being made for a further extension between Merrill and Laurel. The company has planned additional terminals at what is known as Choctaw Point, in the suburbs of Mobile. F. B. Merrill at Mobile is president and general manager.

Muscogee, I. T.—The business men of Muscogee have completed arrangements with the Shawnee, Oklahoma & Missouri Mining & Railroad Co. to extend this road to Muscogee in the near future. The Kenefick Construction Co. of Kansas City, Mo., is general contractor.

Nashville, Tenn.—A report is current that Peter Arlund of Louisville, Ky., has taken up the plan to build a railroad between Nashville and Gallatin, and will extend the Chesapeake & Nashville from Gallatin to Nashville. The estimated distance is thirty miles.

New Orleans, La.—It is reported in connection with the new line proposed between New Orleans and Memphis that a route is being surveyed between the Illinois Central and the Cincinnati, New Orleans & Texas Pacific roads. Among those reported as interested are L. P. Rice and E. L. Ferguson.

Newport News, Va.—The electric line being constructed by the Hampton Roads Railway & Electric Co. is to be extended into Newport

News immediately. About five miles of double track and ten miles of single track have already been built. W. J. Nelms at Newport News is president of the company.

Newport, Tenn.—Train service is in operation on about fourteen miles of the Tennessee & North Carolina Railroad, under construction between Newport and Waynesboro, N. C. J. M. Fawcett of Newport is engineer.

Paducah, Ky.—The Paducah & Cairo Railroad Co. is being organized to build from Paducah to a connection with the Illinois Central system at Wickliffe, Ky. E. W. Smith of Paducah is one of the promoters of the project.

Salem, W. Va.—A correspondent of the Manufacturers' Record writes that surveys are being made in the interest of an electric railroad between Salem and Adamston, fifteen miles in length.

Selma, Ala.—Messrs. Lacy Bros. have secured a contract for a portion of the work upon the branch of the Louisville & Nashville system to be built between Selma and Martin's Station. The estimated length of the extension is twenty-seven miles. R. Montfort at Louisville, Ky., is chief engineer.

Springfield, Tenn.—It is reported that the Louisville & Nashville may change its present route between Edgfield and Springfield, and that surveys are being made for this purpose. R. Montfort at Louisville, Ky., is chief engineer.

Tuscaloosa, Ala.—It is announced that all of the stock has been subscribed in the interest of the Warrior Southern Railroad, to be built by the Southern Railway Co. The capital stock of the Warrior Southern Railroad is placed at \$300,000. W. H. Wells at Washington is engineer. Vice-President A. B. Andrews of the Southern has been elected president.

Waycross, Ga.—It is reported that the Waycross Air Line Railroad Co. is now considering a further extension of its road from Cordele to Montezuma, Ga., and possibly Birmingham, Ala. G. D. Wadley at Waycross is general manager of the company.

Wheeling, W. Va.—The Columbus, Newark, Zanesville & Wheeling Electric Railway Co. has been incorporated in Ohio to build from Wheeling to Columbus, Ohio. Among those interested are L. C. Taylor and John S. Black.

Winchester, Va.—It is reported that surveys are being completed for the spur to be constructed between the Valley branch of the Baltimore & Ohio and the Cumberland Valley Railroad. J. M. Graham at Baltimore is chief engineer of the Baltimore & Ohio.

Street Railways.

Cleburne, Texas.—Robert H. Cornell, one of the promoters of the electric street railway at Cleburne, writes the Manufacturers' Record that it is expected to build the line as soon as a franchise is secured. Mr. Cornell is interested in a road recently completed at South McAlester, I. T. He may be addressed at No. 507 Fullerton Building, St. Louis, Mo.

Nacogdoches, Texas.—C. C. Galloway & Co. have secured a franchise to construct the proposed electric line in the city and suburbs.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Air-lift Pumping Plant.—Hal H. Bacon, chairman water committee, Savannah, Ga., will open bids October 30 for complete installation of an air-lift pumping plant at Savannah water-works, consisting of Corliss compound duplex compressor air pump, condenser, air receiver, pipes, valves and all necessary fittings for connecting thirteen 12-inch wells. Specifications can be had at office of Savannah Water-Works. Bond required and usual rights reserved.

Boiler and Engine.—E. C. Ellington, Raleigh, N. C., wants to buy second-hand 25-horse-power engine and 35-horse-power (locomotive) boiler.

Boilers and Engines.—See "Ice Plant."

Boiler Supplies.—Virginia Brewing Co., Roanoke, Va., wants a lime extractor for boiler water.

Brick.—See "Cypress Shingles."

Brick and Tile Machinery.—D. B. McWilliams, Rossfarm, Pa., wants addresses of manufacturers of brick and tile machinery.

Brick Machinery.—Pendleton & Towles, Clifton Forge, Va., are in need of brick-making machinery, including engine and boiler, new or second-hand.

Brick Machinery.—M. A. Thompson, P. O. Box 5, Gastonia, N. C., wants to purchase machinery for taking the clay from the bank and pressing it into molds; capacity 15,000 to 25,000 per day.

Bridges.—City of Springdale, Ark., wants bids on construction of three or four iron bridges. Address L. D. Petross, mayor.

Building Materials.—H. W. Yoder, New Castle, Va., wants to purchase at once a carload of cypress shingles delivered at New Castle; also a lot of ornamental brick.

Button Machinery.—R. T. McCracken, care of the Picayune, New Orleans, La., wants new or second-hand button machinery, including small table saws, lathes and machines for boring and polishing bone and shell.

Cement Tiling Machinery.—Georgia-Carolina Quarry Co., Charlotte, N. C., wants quotations on molds for the manufacture of cement tiles and artificial stone.

Chair Manufacturers.—Witherspoon Bros. & Co., Sumter, S. C., want addresses of manufacturers of or dealers in revolving chairs with iron bottoms, which can be screwed to the floor.

Chandeliers.—G. H. Newby, Hertford, N. C., wants to buy chandeliers for church.

Church Furniture.—See "Chair Manufacturers."

Coffin Machinery.—See "Woodworking Machinery."

Cooperage.—M. J. Grove Lime Co., Stephen City, Va., wants to purchase machinery for barrel factory of 500 to 1000 per day capacity.

Dust Collector.—Hickory Furniture Co., Hickory, N. C., is in the market for a second-hand dust collector.

Electrical Equipment.—G. O. Sanders, Pine Bluff, N. C., and 89 State street, Boston, Mass., will buy eight miles of electric line wire and accessories, also a triplex pump to discharge 400,000 gallons of water a day of twenty-four hours, and may be in the market for water-wheel to give fifty horsepower under 13-foot fall.

Electrical Wiring and Furnishings.—J. G. Marshall, chairman, Columbia, S. C., will receive proposals until October 30 for electric wiring of Statehouse. Plans and specifications are on file at office of W. B. Smith Whaley & Co., engineers. Bids must be accompanied by certified check for \$100. Bond required and usual rights reserved.

Electric-light Plant.—F. C. Turner, Port Tampa City, Fla., will be in the market for a 500 16-candle-power electric-light plant.

Electric-light Plant.—F. P. Cover & Son, Andrews, N. C., want proposals on electric plant, including dynamo, wiring, etc.

Electric-power Plant.—Edward Flox, Demorest, Ga., will be in the market for water-wheel, flumes, dynamo, motor and electric power and lighting plant complete.

Electric Wiring.—See "Hotel Equipment."

Engine.—Georgia Foundry and Machine Works, Rome, Ga., is in the market for a 100 to 125-horse-power (Corliss) engine.

Fire Hose.—City of Lexington, Ky., is considering the purchase of 2000 or 3000 feet of fire hose. Address "The Mayor."

Filters.—G. C. Evangelides, Navarino street, Piraeus, Greece, wants prices and catalogues on filters for oil.

Flour Mill.—S. C. McCandless, Jackson, Ga., is in the market for complete equipment (except power) for 25-barrel roller flour mill.

Foundry Equipment.—See "Stove-works Machinery."

Foundry Equipment.—Valley Iron Works, Williamsport, Pa., wants to correspond with manufacturers of pulley-molding machinery.

Heating Apparatus.—W. P. Dowling, Jr., Charleston, S. C., will probably want bids on heating apparatus.

Hotel Equipment.—Stephen Porter, Andrews, N. C., wants proposals on plumbing, furnishing and electric wiring for hotel.

Ice Plant.—F. C. Turner, Port Tampa City, Fla., will be in the market for a five or six-ton ice plant, with engines, boilers, etc.

Machine Tool.—Sprout, Waldron & Co., Muncy, Pa., is in the market for a 10-foot 30-inch-swing lathe.

Machine Tools.—See "Plumbers' Supplies."

Mining-fuse Machinery.—G. C. Evangelides, Navarino street, Piraeus, Greece, wants to obtain prices and catalogues of machines to make fuses for mining purposes.

Molds.—See "Cement Tiling Machinery."

Naval-stores Machinery.—See "Saw-mill."

Paper-bag Machinery.—G. C. Evangelides, Navarino street, Piraeus, Greece, wants prices on paper-bag machines.

Patrol Wagon.—City of Lexington, Ky., is considering the purchase of a police patrol wagon. Address "The Mayor."

Paving.—E. C. Dunn, city engineer, Alexandria, Va., will open bids October 21 for paying 3000 square yards of vitrified block paving on a six-inch concrete base and setting 1550 linear feet of six-inch granite curb in concrete. City will furnish contractor the block and curb. Specifications, conditions, etc., can be had on application. Usual rights reserved.

Plumbers' Supplies.—Pate & King, Weldon, N. C., want prices on pipe-cutting machinery, stocks, dies, plumbing supplies, etc.

Pulverizing Machinery.—Brown & Zortman Machinery Co., Pittsburg, Pa., wants addresses of manufacturers of machines for pulverizing bones and tobacco stocks, to be used for fertilizing purposes.

Pump.—See "Electrical Equipment."

Pump, etc.—Proposals are wanted for a 3,000-gallon pump to be run by turbine wheel; have twelve feet head and the lift is 365 feet. Bids are wanted for pump and wheel. Address W. C. N. Randolph, Jr., superintendent city water-works, Lynchburg, Va.

Pumping Plant.—See "Air-lift Pumping Plant."

Railway Equipment.—J. E. Bowen, P. O. Box 631, Norfolk, Va., wants railroad turntable, second-hand.

Railway Equipment.—Wanted—For immediate or quick delivery, one 50-ton 10-wheel locomotive, new or second-hand. Address Box 295, Orange, Texas.

Railway Equipment.—Salem Iron Works, Salem, N. C., is in the market for a 10 to 15-ton (Shay or Climax) locomotive geared for use on wooden rails.

Railway Equipment.—Mullins Lumber & Brick Co., Mullins, S. C., wants second-hand engine for hoisting logs and as motive power for tramroad.

Railway Equipment.—Wright & Sons, Alexandria, Va., want to lease for five years two and one-half miles of standard 50 or 60-pound T rails, with spikes and splices, with or without a 30 or 40-ton locomotive, new or second-hand.

Railway Equipment.—Jos. E. Bowen, Citizens' Bank Building, Room 413, Norfolk, Va., is in the market for a 36-inch gauge 18-ton mogul engine, separate tender.

Rice-mill Machinery.—Joseph Sherard, Iva, S. C., wants a machine for cleaning rice.

Saw-mill.—Loomis & Hart Manufacturing Co., Chattanooga, Tenn., will want full equipment for band saw-mill of 50,000 feet per day capacity.

Saw-mill.—Eureka Lumber Co., J. H. Stevens, Jr., vice-president, Lux, Miss., is in the market for saw-mill of 75,000 feet daily capacity, excepting boilers.

Saw-mill.—Wilmer Lumber Co., Wilmer, Ala., will later on be in the market for saw-mill and naval-stores machinery. Address Chas. C. Vaughn.

Sewerage.—Sealed proposals will be received until October 30 by T. C. King, city secretary, Beaumont, Texas, for labor and material needed in construction of two trunk sewers and laterals; trunk sewers of brick and laterals of pipe; estimated cost \$70,000. Each proposal must be accompanied by certified check for \$2500. Bond required and usual rights reserved. For plans, specifications and further information address city secretary or M. C. Orlopp, special engineer.

Starch Machinery.—G. C. Evangelides, Navarino street, Piraeus, Greece, wants prices and catalogues on starch machinery.

Stove-works Machinery.—Hanks Foundry Co., Rome, Ga., will be in the market for machinery for the manufacture of stoves, etc.

Water-motor Works.—Shepler Water Motor Co., Clarksburg, W. Va., will be in the market for entire outfit of machinery for manufacture of water motors, water wheels, etc.

Water System.—C. L. J. Frohwitter, assistant quartermaster, Fort Dade, Fla., will open bids October 25 for constructing water system to consist of one pump and boiler-house, pumping machinery, wooden tank and trestle, distributing system and well system and suction pipes. United States reserves right to reject bids. Information furnished on application.

Water-wheel. — See "Electrical Equipment."

Water-wheels. — See "Wood-pulp Machinery."

Water-wheels. — See "Electric-power Plant," also see "Pump, etc."

Water-works. — See "Electrical Equipment."

Water-works. — Bids will be received on October 28 for construction of complete system of water-works at Fayette, Miss., to cost \$10,000; plant consists approximately of three miles of pipe, hydrants, valves, deep-well pumping engine having capacity of 100,000 gallons in twenty-four hours, duplex pumping engine with capacity of 5000 gallons per minute, boiler-feed pump, 60x16 full flush front return tubular suspended boiler, eight-inch well from 200 to 300 feet deep, also power-house. C. H. Jenks, Jackson, Miss., is engineer.

Well-boring. — North Alabama Oil & Asphalt Co., W. T. Robinson, manager, Blount Springs, Ala., wants addresses of well-boring companies.

Wood-pulp Machinery. — E. L. Thomas, Bethlehem, Ga., wants prices from manufacturers of wood-pulp machinery and water-wheels.

Wood-pulp Machinery. — Cardwell Machine Co., Richmond, Va., wants addresses of manufacturers of wood-pulp machinery and presses.

Woodworking Machinery. — Pender Lumber Co., Burgaw, N. C., is figuring on a resawing machine with 36-inch saw.

Woodworking Machinery. — G. W. Deniston, Vera, Va., wants to correspond with manufacturers of woodworking machinery.

Woodworking Machinery. — Pate & King, Weldon, N. C., want prices on second-hand barrel staves and heading machinery, band saw, rip saw, etc.

Woodworking Machinery. — E. C. Ellington, Raleigh, N. C., wants to buy four-sided planer and matcher that will dress six inches thick and twenty-four inches wide, medium size, about 5000 pounds.

Woodworking Machinery. — See "Cooperage."

Woodworking Machinery. — H. S. Ackiss, Norfolk, Va., wants addresses of manufacturers of machinery for making coffins and caskets.

TRADE NOTES.

Important Order. — The Carlin Machinery & Supply Co. of Allegheny City, Pa., has shipped a steam spring tester to the Canton Spring Co. of Canton, Ohio.

To Heat a Church. — The Peck-Hammond Company, Cincinnati, Ohio, has been awarded the contract for the heating of the First Presbyterian Church at Wytheville, Va.

To Gas Users. — In another column will be found the announcement of a sale of tanks, gas generators, lampposts and iron pipe at Rocky Mount, N. C. The Acetylene Gas Co. may be addressed.

Of Interest to Lumbermen. — In another column will be found the announcement of a saw-mill, also timber lands, for sale, located on the Suwanee river. The Live Oak Manufacturing Co. of Live Oak, Fla., may be addressed.

Water-Power for Sale. — In another column will be found a reference to an opportunity to purchase a water-power site as well as several buildings on the Little river at Bordeaux, S. C. G. G. Sayre at Abbeville, S. C., may be addressed.

Additional Orders. — Recent orders secured by the Ball Engine Co. of Erie, Pa., are for engines in the Provincetown (Mass.) Electric Light Co., the Omaha High School, for an engine for the Sweet Home plantation in Louisiana, and for two engines in the New York Infant Asylum.

To Ice-makers. — S. T. Lund, 120 High street, Boston, Mass., will give information relative to a plant for making can ice, sixty tons daily capacity. It is complete in every detail, and was made by the York Manufacturing Co. It can be purchased to be used on the premises or removed.

Its Annual Meeting. — The Sprague Electric Co. at its recent annual meeting re-elected the following officers for the ensuing year: John Markle, president; Edward C. Platt, first vice-president; Allan C. Bakewell, second vice-president; Harry R. Swartz, secretary and treasurer.

A Brisk Business. — This is the situation with Messrs. A. J. Polk & Son of Millersburg, Pa., who are securing many orders for

the screw plates, taps, dies and reamers of which they make a specialty; in fact, they have been compelled to install new machinery to increase their facilities for production.

Chicago Office for the S. K. C. System. — Mr. John H. Finney, late of Washington, D. C., has been appointed Western sales manager of the Stanley Electric Manufacturing Co., with offices in the Monadnock Block, Chicago. Mr. V. W. Bergenthal, formerly of Pittsfield, will be engineer of the Western sales office.

Again Honored. — The Lunkenheimer Company of Cincinnati, Ohio, whose exhibit at the Pan-American Exposition attracted so much attention, has been awarded the gold medal for its display of valves, lubricators and engine fittings. This company has a reputation for securing such honors at exhibitions not only in this country, but abroad.

Many Orders. — The Pittsburg Plate Glass Co. of Pittsburg, Pa., has recently given its tenth order to the Burt Manufacturing Co. of Akron, Ohio, for Cross Oil Filters. This is a substantial endorsement of the merits of this filter, but it is as well known abroad as in the United States. The Burt Company has recently shipped two important orders to German manufacturers.

More Testimonials. — Recent letters received by the Joseph Dixon Crucible Co. of Jersey City, N. J., from users of the Dixon graphite on automobiles show that this compound is just what is wanted to properly lubricate every style of motor vehicles. Its value in lubricating bicycles paved the way for its use, and it may be considered one of the best compounds for the purpose.

A Rare Opportunity. — The Eagle Oil & Supply Co., 104 Broad street, Boston, Mass., is adopting a generous method of introducing its specialties to engineers, in asking them to write for information in regard to Premium No. 21 in its premium book. It offers an engineer's tool-chest free. Mention the Manufacturers' Record when writing, and catalogues of the various specialties will be sent free.

A Popular System. — The Broomell vapor system of heating has evidently become very popular throughout the country, judging by the recent contracts received by the Vapor Heating Co. of York, Pa., which is introducing it. Some of the orders include residences in Washington, Leesboro, Va.; the Flagler mansion at Palm Beach, Fla.; the governor's mansion at Charleston, W. Va., as well as residences in Richmond, Va., and York and Waynesboro, Pa.

Took the Medals. — As might be expected, the Buffalo Forge Co. of Buffalo, N. Y., has secured several medals for the excellence of its apparatus exhibited at the Pan-American Exposition. It secured a gold medal for the 500-horse-power engine in operation in the service plant, also a gold medal for the Buffalo fan system of heating and ventilating, while a silver medal was secured for hand punches, shears, and for the Buffalo forges, draft apparatus and blacksmith drills. It was stated that this was the highest award for articles of this character.

Business Is Brisk. — Judging from the number of orders being received by the Bosted Pneumatic Tube Co. of 47 Marine Building, Chicago, business is very brisk with this corporation. It has recently secured orders from Swift & Co., the extensive meat packers, for a pneumatic-tube system to be installed throughout their various buildings, also an order from Higgins & Selter of New York. The company has recently completed a tube system for the Wisconsin Central Railway Co. in Chicago and a cash conveying system for a large Chicago store.

Another Government Exhaust System. — About a year ago the Sterling Blower & Pipe Manufacturing Co. of Hartford, Conn. (offices in Boston, New York and Norfolk, Va.), installed a series of exhaust systems in the plant of the United States navy-yard at Portsmouth, N. H., for handling sawdust and shavings from woodworking machinery, dust from polishing and buffing machinery, etc., which have given entire satisfaction. During the last week the government has placed with the Sterling Company an order for a similar equipment for the Washington navy-yard plant.

Very Busy. — Such is the condition of affairs with the Harry Bros. Company of Dallas, Texas, noted for the Harry metal tanks and cisterns. The company manufactures everything, from the smallest-sized cistern to station tanks for supplying locomotives, and makes a specialty of what is known as the corrugated galvanized-steel tank for storing crude petroleum. It also manufactures

what is called a "knock-down" galvanized-steel tank, which is finding much favor not only in this country, but abroad. The company's business east of the Mississippi river has become very extensive. It has a branch at Beaumont.

A Notable Record. — When it is stated that the Atlas Engine Works of Indianapolis, Ind., has over 20,000 engines and 23,000 boilers in service, the reason for the extensive improvements being made by this concern is apparent. The improvements referred to will fully double the capacity of the works, and include a boiler shop, which will have a total length of 1265 feet, said to be the largest of its kind in the world. The forge shop, which is practically completed, is 333x50 feet, while two new foundries have been decided upon—165x300 feet and 120x500 feet. The new machine shop will be three stories in height and 50x323 feet, while the company has decided to centralize all its power in a building which will be 101x112 feet and equipped with six boilers and three Atlas engines direct-connected to generators for electrical transmission of power. All of the buildings are to be constructed of brick and stone, and will be provided with the latest machinery for handling and treating the material.

A Diversified Business. — To be what is termed a manufacturing stationer these days a man has to conduct a business which has many branches. Stationery in the common sense of the word means paper, pens, ink and a few other articles, but really these represent a small portion of the supplies which must be included if the firm is up to date. An illustration of this fact is given in the business of J. W. Middleton of 167 Dearborn street, Chicago, Ill., one of the principal manufacturing stationers in the country. Mr. Middleton's facilities for furnishing everything required in the counting-room of a firm or company are of the best, while one of his specialties is the manufacture of financial paper, such as bond and stock certificates, and the latest ideas in books especially arranged for banking and trust companies. Several works published by this house are bank records and minutes, cashiers' bank minutes and American national bank records. So extensive is the business conducted that any person desiring anything in the way of banking or general stationery will find it of value to correspond with this concern.

TRADE LITERATURE.

A Valuable Publication. — The October number of Power and Transmission is of unusual interest. It contains a number of articles descriptive of rope drives, as well as illustrated articles upon extensive manufacturing plants in the West. It is published by the Power & Transmission Publishing Co. of Mishawaka, Ind.

Important Testimonials. — The latest pamphlet issued relative to the Ruberoid roofing manufactured by the Standard Paint Co., 100 William street, New York, contains some very important testimonials of its value. Its qualities for withstanding the weather have become noted, while actual demonstrations have shown that it is fireproof.

For Automobiles. — The catalogue recently completed by A. L. Dyke of St. Louis gives a complete list of gasoline and steam motors, as well as the Dyke carburetter, coils, plugs, batteries and other equipment for automobiles of which this concern makes a specialty. By enclosing postage to the Linmar Building, St. Louis, anyone interested may secure a copy of the publication.

Myers' Goods. — Most of the farmers in the United States are thoroughly familiar with the fact that Myers' goods are good goods. Messrs. F. E. Myers & Bro. have recently been distributing a quantity of literature advertising their pumps, hay tools, door hangers and other specialties so familiar to farmers. They will be pleased to send any of this matter if addressed at Ashland, Ohio.

A Business Encyclopedia. — Merchant's "Red Book," appropriately bound in red covers, is literally a business encyclopedia of the wares which Messrs. Merchant & Co. of Philadelphia offer the trade. This concern is well known for its roofing plate and bright tin in plates and sheets, solder, Babbitt metals, tiling, ventilators and other building materials. The "Red Book" contains a complete list of the sizes and prices.

Profitable Advertising. — The money which has been spent in experimenting in advertising represents many large fortunes, and the plans which have been offered are innumerable. In a recent pamphlet the Manufacturers' Advertising Bureau of New York refers to the merits of standard publications,

such as the Manufacturers' Record, for obtaining valuable results. This bureau, which is located at 126 Liberty street, New York, has a high reputation with its patrons.

Improved Appliances. — The Simpson Compound Hammer Pulverizer is illustrated and described in a recent pamphlet issued by the Simpson Manufacturing Co. of 1208 Chamber of Commerce Building, Chicago. The machine especially commends itself for the treatment of such materials as coal, limestone, phosphate rock and other substances requiring pulverization, and combines both economy and durability. The Simpson Company will be pleased to send the descriptive circular to all interested.

The Mallory Line steamship Denver, recently completed by the Harlan & Hollingsworth Company of Wilmington, for service between New York and Galveston, has been placed in commission. The Denver is 390 feet in length, 48 feet beam and 21 feet deep, with accommodations for 150 passengers and a capacity for carrying 10,000 bales of cotton. It is calculated that the vessel will have a speed of about seventeen knots an hour.

The People's Transportation Co. has been organized at Sartartia, Miss., it is understood, to operate a line of steamers in that State. Among those interested is J. R. Lacey.

Mr. W. W. Duson of Crowley, La., reports that at least \$250,000 worth of buildings will be erected at that place within the next six months.

All of the sulphur, 3525 tons, produced in the United States in 1900 came from Louisiana and Utah.

The use of oil for fuel is extending among the sugar plantations and the rice mills of Louisiana.

Fall Hunting in the Maine Woods.

The hunting season is now on, and the sportsmen have already commenced to migrate towards the inexhaustible woodlands and forests of Maine, where game in abundance can be found.

The reports received this year state that deer are more plentiful than ever before, and during the close season hunters who had gone down to camp early so as to get a line on their whereabouts and be able to bag a few deer at the outset were startled at the great numbers which appeared to be everywhere.

From the Moosehead Lake country reports are to the effect that the guides are making ready for more sportsmen than ever before, and scores of moose have been seen in that vicinity.

The country along the Penobscot river and the Aroostock region are fairly alive this year with deer, and this is also considered a remarkably good moose territory.

Maine offers scenes and pleasures in the line of fishing and hunting all her own, and in the chase for big game she has no competitors. Deer are not only more numerous in Maine, but they grow to a much larger size, and the person who knows how to handle a gun at all is reasonably sure of his full quota of deer and moose.

Although deer and moose are usually enough to satisfy the appetite of the average sportsman, still they are by no means the only kinds of game to be found in these vast timberlands. Braces of smaller game, together with a plentiful supply of partridge and quail, have already been brought into camp, and in that section which lies contiguous to the Dead River Region, and known as the Rangeley Region, the farmers are very much troubled on account of the numerous depredations which have this year been made by bears on the orchards and corn fields. Bears are much more numerous this season than ever before, and to the sportsman who enjoys this exciting sport this portion of Maine is an especially desirable spot.

All ways now lead to Maine, and remember that the Boston & Maine Railroad is the only road out of New England that makes direct connections for the heart of the hunting and fishing region.

Send two-cent stamp to the General Passenger Department, Boston & Maine Railroad, Boston, for its illustrated book called "Fishing and Hunting."

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

New Corporations.

The Hill Avenue Investment Co. has been formed at Valdosta, Ga., by local business men.

T. J. Williams has been elected president of the Commercial National Bank recently organized at Nacogdoches, Texas.

Samuel Clark and others have formed the Security Company of North America, capitalized at \$50,000, with offices at St. Louis.

The Patterson Avenue Building and Loan Institution has been organized at Baltimore by William F. Flagg and others.

James E. Hickey is interested in the Sanders Loan & Investment Co. recently organized at Atlanta, Ga., with \$25,000 capital stock.

Frank B. Brown and Henry Powell are interested in the national bank being organized at Longview, Texas, with \$50,000 capital stock.

B. V. Booth of Clifton Forge, Va., is interested in the First National Bank, recently organized in this town with \$50,000 capital stock.

It is announced that R. A. Hardaway will be president of the Merchants' National Bank being organized at Newnan, Ga., with \$50,000 capital stock.

The Citizens' Bank, recently organized at Edmond, Okla., has begun business with \$10,000 capital stock. W. H. Tuttle is president, and J. M. Hunt, cashier.

Arrangements have been made to organize a bank at Royston, Ga., with \$25,000 capital stock. Among those interested are J. J. Barnes and S. A. Ginn.

The Randolph County Bank, recently organized at Elkins, W. Va., has begun business with Elihu Hutton, president; J. H. Font, vice-president, and R. C. McCandish, cashier.

Thomas Mount of Vicksburg, Miss., is interested in the organization of another national bank in that city to be capitalized at \$100,000. It is to be called the National Bank of Commerce.

Arrangements are being made by the Interstate Trust & Guaranty Co. of Cumberland, Md., to begin business immediately. It is capitalized at \$250,000. Benjamin A. Richmond is president.

Promoters of the new national bank at Luray, Va., have secured a charter, and will begin business in the near future. The bank is capitalized at \$25,000. Among those interested is J. H. Sherman.

J. P. Redding has been elected president of the High Point Building and Loan Association, recently organized at High Point, N. C. D. A. Stanton is vice-president, and C. M. Hauser, secretary and treasurer.

New Securities.

The Acadia Bank of Crowley, La., has purchased the issue of \$20,000 in 5 per cent. school bonds of that town.

The town of Hazlehurst, Miss., has voted in favor of issuing \$35,000 for improvements. Address the mayor.

The town of Dickson, Tenn., has voted in favor of issuing \$35,000 in bonds for improvements. Address the mayor.

The town of Mansfield, La., has voted in favor of issuing \$13,500 in improvement bonds. The town clerk may be addressed.

John W. Dickey of Augusta, Ga., has purchased the issue of \$25,000 in 5 per cent. school bonds of Dublin, Ga., paying 106.37.

Refugio county, Texas, has decided to

issue \$5000 in bonds for bridges. The county commissioners may be addressed at Refugio.

The town of Farmersville, Texas, has voted in favor of issuing \$12,000 in bonds for improvements. The town clerk may be addressed.

There is a possibility that the town of Phoebus, Va., will place on the market \$6000 in bonds for improvements. The mayor may be addressed.

The town of El Dorado Springs, Mo., has voted in favor of issuing \$14,000 in improvement bonds. James R. Creel, city attorney, may be addressed.

Proposals will be received until October 25 for the issue of \$130,000 in 5 per cent. bonds for the city of Greensboro, N. C., by W. H. Osborn, mayor.

There is a possibility that the city of Fernandina, Fla., will issue \$60,000 in bonds for various purposes. The mayor will give further particulars.

The county court of Hamilton county, Tennessee, has decided to issue \$100,000 in 5 per cent. funding bonds. The board may be addressed at Chattanooga.

W. S. Langford, secretary of the board of public works of Newberry, S. C., will receive bids until October 30 for \$25,000 in 4 per cent. bonds issued by this town.

Erath county, Texas, will probably place on the market an issue of \$10,000 in refunding bonds. The county commissioners may be addressed at Stephenville.

Newton county, Texas, will vote on November 2 on the question of issuing \$25,000 in bonds for various purposes. The board of commissioners may be addressed at Newton.

An issue of \$14,480 in refunding bonds of Brewster county, Texas, has been approved by the State authorities. The county commissioners may be addressed at Alpine, Texas.

An issue of \$8000 in school bonds of the district of Childress, Texas, has been approved by the State authorities. The school board may be addressed at the town of this name.

An issue of \$53,000 in refunding bonds of Hardeman county, Texas, has been approved by the State authorities. The county commissioners may be addressed at Quoribab, Texas.

It is probable that an issue of \$37,000 in bonds of Dallas, Texas, will be placed on the market in the near future. The county commissioners may be addressed at the city of Dallas.

Taliaferro county, Georgia, has voted in favor of issuing \$22,500 in 4½ per cent. bonds for improvements. The board of county commissioners may be addressed at Crawfordville, Ga.

The question of issuing \$90,000 in bonds will be decided upon at an election to be held at Salisbury, N. C., on November 5. The mayor will give further particulars relative to the proposed issue.

An election will be held at Navasota, Texas, on November 12 to decide the question of issuing \$15,000 in improvement bonds bearing 4 per cent. interest. The mayor may be addressed.

An election is to be held in Floyd county, Georgia, to decide the question of issuing \$70,000 in 4 per cent. bonds for refunding purposes. The board of commissioners may be addressed at Rome, Ga.

Bids will be received until October 25 by Q. O. Turner for the issue of \$68,000 in 6 per cent. bonds of the improvement district of Texarkana, Ark. Mr. Turner may be addressed at Texarkana.

It is probable that the town of Sylvester, Ga., will soon place on the market an issue of \$10,000 in 5 per cent. school bonds decided upon at the recent election. The town clerk may be addressed.

The issue of \$25,000 in improvement bonds recently voted for by Webb county, Texas, will be placed on the market in the

near future. The board of commissioners may be addressed at Laredo, Texas.

Bids will be received until October 25 for the issue of \$10,000 in 4 per cent. bonds of the city of Asheville, N. C., now on the market. William T. Heston is city treasurer, and may be addressed.

Robert Nicholson, president of the police jury of East Carroll parish, Louisiana, may be addressed relative to the issue of \$16,500 in 5 per cent. bonds now on the market. He may be addressed at Lake Providence, La.

Financial Notes.

Twenty-four new banks, with a combined capital stock of \$579,800, were chartered by Georgia during the past year.

The State Banking Association of Tennessee at its annual meeting at Nashville elected M. S. Buckingham of Memphis, president; Joseph H. Thompson, D. W. Shorter and C. J. Taylor, vice-presidents, and W. A. Sadd of Chattanooga, treasurer. Papers were read at the meeting on "Co-operation of Local Banks" and "The Legal Duties of Bank Presidents and Cashiers," as well as several others on interesting topics.

Columbia Disc Graphophone.

Nothing has occurred in years in connection with the talking-machine business that has caused more of a sensation than the recent announcement that the Columbia Phonograph Co. was to put a disc graphophone on the market. The fact has probably been lost sight of that when the graphophone was invented it was brought forward in two forms—as a disc machine on which the recording stylus makes a zig-zag cut, and as a machine using cylinders on which the recording stylus makes a straight cut of varying depth. These machines each had their advantages, and the question as to which was the better one to manufacture was left to the public for decision, with the result that the demand for the one using cylindrical records grew from a small beginning to enormous proportions, while there was practically no call for the disc type. Thus for years the model of the last-named instrument has awaited the possible coming of the day of its utilization. Graphophones using the cylindrical records have, in the meantime, been sold in all parts of the world by the hundreds of thousands, and the art of record-making has been carried year by year to a higher point of excellence, until the Columbia record of today is among the perfected products of human ingenuity.

In the years that have been passing while the graphophone has been changing from a crude talking machine to the wonderful instrument that is now universally accepted as the best, if not the only satisfactory machine in use, other manufacturers, recognizing the impossibility of making progress in competition with the graphophone and the world-renowned Columbia records, have brought out, under various names, imperfect disc machines, and while their sale has been limited, sufficient interest in them, with the constant increase in the army of talking-machine users, has finally been shown to warrant the Columbia Phonograph Co. in supplying a first-class machine of the disc description. It is built on more scientific lines than the disc machines of other makers, and is superior to them in every respect. Instead of being a hybrid thing, it is a graphophone, with all the advantages of that well-known and highly-valued instrument, with its mechanism skilfully adapted to the use of indestructible disc records similar to though far better than those used by other disc machines.

The facilities of the Columbia Phonograph Co. for manufacturing graphophones of every conceivable kind, as well as records of surpassing merit, are so far in advance of those of their little rivals that the mere announcement that they will now furnish a disc graphophone has brought them heavy advance orders from all points of the compass. With this entrance into a field in which small concerns have accomplished a little, but not very much, the Columbia Phonograph Co. takes possession of the entire business, having won its commanding position by deserving it and by right of having been the first in the field with every improvement that tended to advance the art. †

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Pennsylvania Railroad Special Excursions to Pan-American Exposition.

The Pennsylvania Railroad Co. will run special excursions to Buffalo on account of the Pan-American Exposition from Baltimore and adjoining territory on September 26, October 2, 8, 17, 23 and 29. Round-trip tickets, good going only on special train leaving Baltimore, Union Station, 9.05 A. M., and York 10.43 A. M., and on local trains connecting therewith, and good to return on regular trains within seven days, including day of excursion, will be sold at rate of \$10 from Baltimore, and proportionate rates from other points. Tickets will be good for passage in parlor cars and sleeping cars on payment of usual Pullman rates. Stop of thirty minutes will be made at Williamsport for luncheon. For specific times and rates, consult local ticket agents. †

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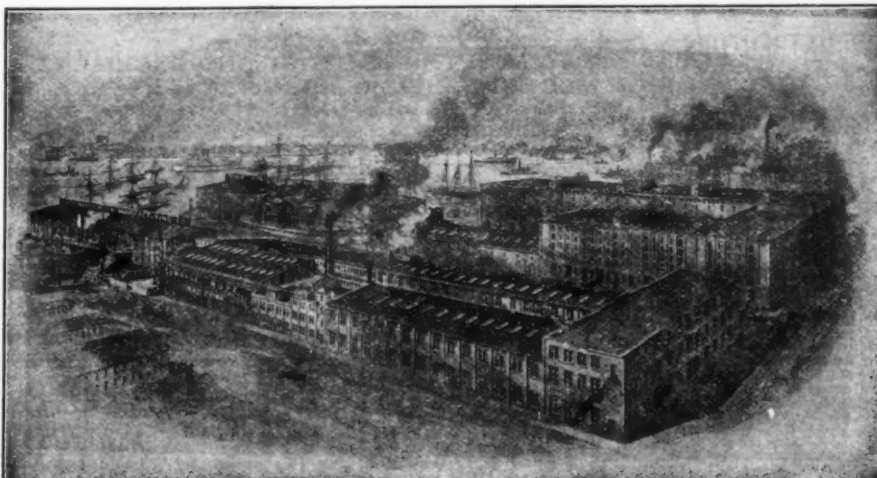
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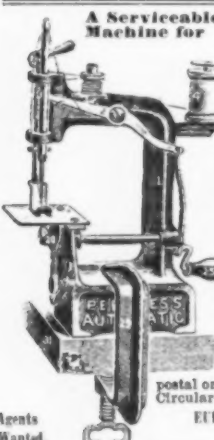
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PROPOSALS.

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., October 9, 1901.—Sealed proposals will be received at this office until 2 o'clock P. M. on the 28th day of October, 1901, and then opened, for the installation of a conduit and wiring system for the U. S. Court House and Post Office building at Altoona, Pa., in accordance with the drawings and specification, copies of which may be obtained at this office or at the office of the Superintendent of construction at Altoona, Pa., at the discretion of the Supervising Architect. **JAMES KNOX TAYLOR, Supervising Architect.**

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., October 9, 1901.—Sealed proposals will be received at this office until 2 o'clock P. M. on the 8th day of November, 1901, and then opened, for furnishing the heating apparatus complete in place for the U. S. Court House and Post Office building at Altoona, Pa., in accordance with drawings and specification, copies of which may be had at this office or at the office of the Superintendent at Altoona, Pa., at the discretion of the Supervising Architect. **JAMES KNOX TAYLOR, Supervising Architect.**

THE County Board of Commissioners of Spartanburg County, South Carolina, will receive bids until December 3d, 1901, for \$50,000.00 of 20-year 4 per cent. coupon bonds of said county, bearing date January 1, 1902, interest payable 1st January and 1st July.

The right to reject any and all bids is reserved. These bonds are non-taxable.

The present bonded debt of the county is \$213,800.00, and the assessed value of property is \$11,803,371.00. Copy of act authorizing bonds and any further information can be had by addressing

J. D. LEONARD,
County Supervisor, Spartanburg, S. C.

Sealed Proposals

will be received at the office of the Board of Public Works of Newberry, S. C., until 6 p. m., October 30, 1901, for Twenty Five Thousand Dollars (\$25,000), of 4½ per cent. Bonds, running 40 years with privilege of redemption at 20 years. Interest payable annually on January 1st of each year.

The right is reserved to reject any or all bids.

W. S. LANGFORD, Secretary.
Board of Public Works.

Jacksonville City Bonds for Sale.

MAYOR'S OFFICE,
Jacksonville, Ala., Sept. 12, 1901.
Sealed bids will be received at this office until Monday, 21st October, 1901, noon, for the sale of eight thousand dollars in bonds.
The bonds to run twenty years from date at 5 per cent., payable semi-annually. See act of Alabama Legislature approved January, 1901. This amount constitutes the entire indebtedness of the City of Jacksonville.
Any information desired may be obtained at this office. Right is reserved to reject any or all bids.
H. L. STEVENSON, Mayor.

Asheville, N. C., Bonds FOR SALE.

SEALED PROPOSALS will be received by the City Treasurer until October 25th, at 8 P. M., for the purchase of \$10,000 of School Building Bonds.
Dated November 1st, 1901; interest 4 per cent. semi-annual.
Maturity—November 1st, 1931.
Payable—New York or Asheville.
Denomination—\$500 or \$1000 each.
Deposit 1 per cent. or \$100.
Default—City never defaulted on interest or principal.
Assessed valuation, \$5,046,975.
Real valuation, 8,000,000.
Bonded debt, 781,000.

WILLIAM R. HESTON,
City Treasurer.

NOTICE TO CONTRACTORS.

TALLAHASSEE, FLORIDA, Oct. 1, 1901.
The Capitol Commission, appointed to make additions and alterations to the State Capitol Building of Florida, invites sealed proposals for the erection and completion of the work according to the plans and specifications prepared by Architect Frank P. Milburn, Columbia, S. C.
Plans and specifications and forms of contract and bond required will be on file at the State House in Tallahassee, and at the architect's office in Columbia, S. C., on and after October 14, 1901.
Each bidder will file with his bid a certified check on a well known bank in Florida for the sum of five thousand dollars, made payable to the State Treasurer of Florida, as a guarantee that if his bid be accepted he will enter into contract at once, and upon entering into the contract make an acceptable bond in the sum of twenty-five thousand dollars for the faithful performance of his contract. Should the bidder fail to enter into contract and make the bond within fifteen days after acceptance of his bid, the check will be forfeited as liquidated damages for the delay.
All bids to be filed not later than twelve o'clock noon, November 14, 1901.
The Commission reserves the right to reject any and all bids.

W. S. JENNINGS, Governor,
And Chairman of Capitol Commission.

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THE Commission for the Lighting of the State House and other Public Buildings in the City of Columbia, invites Proposals for the Electric Wiring of the State House.

Plans and specifications will be on file at the office of **W. B. SMITH WHALEY & CO., Engineers, Columbia, S. C.,** on and after October 12th, and sealed bids will be received by **J. Q. MARSHALL, Chairman of said Commission, until 12 o'clock Wednesday, October 30th.**

All bids must be accompanied by certified check for \$100, to guarantee that the successful bidder will duly sign the contract and furnish bond for one-half (½) of the amount of the contract.
The Commission reserves the right to reject any and all bids.

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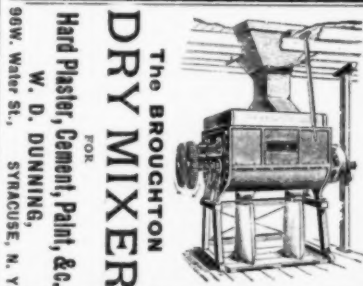
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ALPHABETICAL INDEX OF ADVERTISERS.

For Classified Index See
Pages 3, 5, 7, 9, 11, 13, 15
and 17.

Ads. marked * appear every other week. Ads. marked † appear in first issue of the month. Ads. marked ‡ not in this issue.

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Alabama Iron Works. 48	Bushnell, G. H., Press Co. 53	Ellington Mfg. Co. 57	International Trust Co. 31	Muzzy Bros. 47	Smith, Samuel J., & Co. 88
Alber & Bryne. 6	Bushong, M. M. 44	Emmert Mfg. Co. 1	Jackson Mfg. Co. 2	Myers, F. E., & Bro. 51	Smith, S. Morgan, Co. 85
Albro-Clem Elevator Co. 24	Byers, John F., Machine Co. 21	Erikson, Edward E. 6	Jacobs, M. R. 32	Nantz, B., & Co. 10	Smythe, S. R., Co. 4
Alexander Bros. 26	Caldwell H. W., & Son Co. 4	Etting, Edward J. 26	Jacobson Machine Mfg. Co. 28	Nashville, Chattanooga & St. Louis Railway. 35	Snyder, H. P., Mfg. Co. 1
Alexander, S. B., Jr., Co. 59	Caldwell, W. E., Co. 53	Eureka Fire Hose Co. 26	Jacoby, W. F., & Co. 8	National Pipe Bending Co. 19	Southeastern Lime & Cement Co. 23
Allington & Curtis Mfg. Co. 53	Cameron, A. S., S. Pump Wks. 54	Eureka Supply Co. 32, 44	Jeffrey Mfg. Co. 25	National Rodding & Supply Co. 45	Southern Engine & Boiler Wks. 19
Alpha Photo-Engraving Co. 53	Cameron & Barkley Co. 53	Everett, W. M. 26	Jenkins Bros. 32	Natl. Rky. & Construction Co. 56	Southern Iron & Equipment Co. 40
Alsing, J. R., Co. 42	Camp Engineering Co. 36	Excelsior Knitting Mch. Mfg. Co. 51	Jennings, W. S. 32	New Atlantic Hotel. 56	Southern Railway Co. 36
American. 52	Carbondale Chemical Co. 22	Exeter Machine Works. 19	Jewell Water Still Co. 27	New England Automatic Weighing Machine Co. 51	Southward Fdy. & Mch. Co. 15
American Arithmometer Co. 9	Carborundum Co. 28	Exeter Machine Works. 24	Johns, H. W., Mfg. Co. 7	New York Continental Jewell Filtration Co. 2	Spartanburg Loom Harness Co. 50
American Blower Co. 17	Cardwell Machine Co. 62	Fairbanks Co. 21	Johnson, John, & Co. 52	New York Equipment Co. 39	Speidel, J. G. 24
American Bridge Co. 1	Carlisle Machinery & Supply Co. 38	Fairmount Machine Co. 50	Johnson, W. A. 5	Nichols, T. W. 8	Epeir, W. E. 6
American Cement Co. 9	Carnell, George. 6	Farquhar, A. B., Co., Limited. 17	Joseph, Isaac, Iron Co. 39	Nicholson File Co. 8	Spencer & Hall. 55
American Cotton Oil Co. 62	Carolina Fire Brick Works. 6	Fay, J. A., & Egan Co. 48	Kearney & Mattison Co. 30	Niles-Bement-Pond Co. 2	Speyer & Co. 37
Amer. Cor. School of Textiles. 32	Carolina Portland Cement Co. 3	Fayerweather & Ladew, Inc. 28	Keeler, E., Co. 18	Nordyke & Marmon Co. 2	Sprague Electric Co. 58
American Diamond Rock Drill Co. 43	Caroline Iron Works. 42	Felton, S. A., & Son Co. 7	Kelley, Benj. F., & Son. 37	Norton & Cole Machinery Co. 37	Sprout, Waldron & Co. 25
Amer. Elec. Sup. & Mfg. Co. 37	Carpenter, George B., & Co. 25	Finished Steel Co. 28	Kelley Island Line & Transport Co. 8	Norton & Cole Machinery Co. 37	Standard. 25
American Injector Co. 3	Carver Cotton Gin Co. 50	Flint-Hugh & Co. 43	Kelly, O. S., Co. 43	Norton & Cole Machinery Co. 37	Standard Caster & Wheel Co. 24
American Iron & Steel Mfg. Co. 12	Cary Spring Works. 43	Flint & Walling Mfg. Co. 43	Kendall & Flick. 12	Norton & Cole Machinery Co. 37	Standard Scale & Sup. Co., Ltd. 16
American Locomotive Co. 13	Case Mfg. Co. 21	Florida Iron & Wood Works. 48	Kennedy, Walter. 23	Norton & Cole Machinery Co. 37	Standard Traction Brake Co. 16
American Mfg. Co. 31	Casey, D. L., Machine Co. 36	Flower, Walter, L., & Co. 7	Kennicott Water Softener Co. 23	Nye & Treddick. 61	Stanley Electric Mfg. Co. 9
American Sheet Steel Co. 30	Caster, Curran & Bullitt. 36	Fox, M. Ewing, & Co. 46	Kentucky Electrical Co. 50	Obermayer, S., Co. 11	Star Brass Works. 47
American Spiral Pipe Works. 54	Cattell, Charles. 30	Frank Machinery Co. 49	Kilburne & Jacobs Mfg. Co. 2	Ohio Injector Co. 19	Star Lumber Mills. 38
American Steam Gauge & Valve Mfg. Co. 20	C. & B. Line. 30	Freese, E. M., & Co. 41	Kilburn, Lincoln & Co. 50	Old Dominion Land Co. 50	Starr, B. F., & Co. 29
American Steel Hoop Co. 5	Cedarhurst Co. 35	French, A., Spring Co. *	Kilby Locomotive & Mach. Wks. 40	Old Motor Works. 17	Starr, R. F., Supply Co. 40
American Supply Co. 51	Champion Machine Co. 50	French, Sam'l. H., & Co. 8	Kirk, W. W. 37	Otto Gas Engine Works. *	Steele, J. C., & Sons. 44
American Tool Works Co. 41	Chapman, W. A., & Co. 6	Frick Co. 22	Klitzon Hydro-Carbon Heating & Incandescent Lighting Co. 59	Pancoat International Ventilator Mfg. Co. 46	Steele, J. C., & Sons. 44
American Type Founders Co. 53	Charlotte Roof & Paving Co. 47	Freeshing, Dr. Henry. 6	Klauder-Weldon Dye's Mch. Co. 52	Park Mfg. Co. 24	Stirling Blower & Pipe Mfg. Co. 19
Andrews, Perry, & Bro. 54	Chattanooga Paint Co. 46	Galena Oil Co. 30	Landis Tool Co. 1	Parkhurst Bros. & Co. 24	Stevens, H., Sons Co. 60
Arctic Machine Co. 23	Chattanooga Machinery Co. 46	Galt, John, & Sons. 46	Lane Mfg. Co. 49	Parish, R. L. 35	Stevenson, H. L., & S. E. 32
Armistead Mfg. Co. 47	Chesapeake Electric Co. 59	Gandy Belting Co. 26	Lang, S. Logan. 38	Paterson, Frank L. Co. 36	Stillwell-Bierce & Smith-Vaile Co. 55
Armstrong, E. S., & Bro. 39	Chesapeake Steamship Co. 83	Gardner Governor Co. 55	Langford, W. S. 32	Payne, O. 32	Stimpson, E. B., & Son. 10
Asher, A. 37	Chester Steel Castings Co. 12	Gardner City Sand Co. 9	Latrobe Steel & Coupler Co. 3	Peacock Iron Works. 43	St. Louis Iron & Machine Wks. 17
Asphalt Ready Roofing Co. 46	Chicago House Wrecking Co. 37	Garfield Paint Co. 46	Latrobe Steel Co. 12	Pease, F. M., Incorporated. 38	Stowell Mfg. Co. 45
Associated Expanded Metal Co. 43	Childs, O. J., Co. 1	Garrett, C. S., & Son. 46	Lawrence Cement Co. 11	Peck, T. M. 20	Struthers, Wells & Co. 17
Atherton Machine Co., The A. T. 52	Chin, Hamilton & Dayton R.R. 53	Gem City Boiler Co. 18	Lederle, Frank. 6	Peckham, G. L., & Sons. 29	Stuebel, G. L., & Sons. 29
Atkins, E. C., & Co. 53	Clarendon Boiler Works. 46	General Electric Co. 58	Leffler, James, & Co. 40	Peckham, G. L., & Sons. 29	Sturtevant, B. F., Co. 29
Atlantic Transport Co. 53	Clark, W. J., Co. 3	General Fire Extinguisher Co. 6	Leonard, J. D. 32	Phenix Iron Works Co. 15	Sturtevant Mill Co. 29
Atlas Co. 38	Clayton Air Compressor Works. 3	Gen'l Incandescent Arc Light Co. 12	Leschen, A., & Sons Rope Co. 25	Phos. Bronze Smelting Co., Ltd. 47	Sullivan Machinery Co. 43
Atlas Engine Works. 18	Cleveland Belting & Mch'y. Co. 39	Gen'l Incandescent Arc Light Co. 12	Lewis, H. F., & Co., Ltd. 53	Pittsburg Paint & Chemical Co. 47	Sweet & Doyle. 22
Atlas Pipe Wrench Co. 56	Cleveland, Lorain & Wheel'g Ry. 32	Gen'l Incandescent Arc Light Co. 12	Lewis, H. F., & Co., Ltd. 53	Pittsburg Meter Co. 47	Synod Pump & Well Co., Inc. 7
Audit Co. of New York. 32	Cleveland Term. & Valley R.R. 32	Gen'l Incandescent Arc Light Co. 12	Lewox, Theodore. 43	Pomona Terra Cotta Co. 51	Tabor Mfg. Co. 4
Aultman Co. 40	Cliff & Gilbert Co. 10	Gen'l Incandescent Arc Light Co. 12	Lidgerwood Mfg. Co. 21	Poor, H. V. & H. W. 57	Tadpole Co. 60
Austin, F. C., Mfg. Co. 42	Climax Mfg. Co. 13	Gen'l Incandescent Arc Light Co. 12	Littleford Bros. 22	Porter, H. K., Co. 13	Tate, Jones & Co. 24
Austin Separator Co. 19	Cochran Co. 38	Gen'l Incandescent Arc Light Co. 12	Live Oak Mfg. Co. 35	Porter, H. K., Co. 13	Taunton Locomotive Mfg. Co. 20
Babcock, H. H., Co. 26	Codd, E. J., Co. 38	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Taylor, Jas. Knox. 32
Babcock & Wilcox Co. 19	Coe Mfg. Co. 38	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Tennessee Lumber Co. 52
Bacon Air Lift Co. 54	Cochran Iron Foundry & Mch. Co. 1	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Textile Mill Supply Co. 51
Baculus Gas Engine Co. 38	Collier & Brown. 45	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Thatcher Belting Hook Co. 26
Badger, E. B., & Sons Co. 45	Colonial Paint & Varnish Co. 45	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Thompson, T. C., & Bro. 5
Baeder, Adamson & Co. 8	Columbia Bridge Co. 10	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Thompson, Son & Co. 36
Baer, Richard P., & Co. 49	Columbia Phonograph Co. 10	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Thompson, Edward H., & Sons. 31
Bailey-Libby Co. 44	Columbia Machine Co. 17	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Titus, E. E. 49
Bailey, John T., & Co. 30	Columbus Machinery Co. 58	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Toomey, Frank. 6
Baird, U., Machinery Co. 37	Commercial Electric Co. 58	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Torbert & Peckham. 40
Baker, H. C., & Co. 38	Conard, Thom. P. 36	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Tower-Binford Elec. & Mfg. Co. 31
Baker, Edgar & Co. 31	Consolidated Gas Co. 36	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Trask, Spencer, & Co. 31
Balderson, H., & Son. 41	Continental Trust Co. 31	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Trenton Iron Co. 56
Baldwin Locomotive Works. 13	Contractors' Plant Mfg. Co., Ltd. 21	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Trevor Mfg. Co. 48
Ball Engine Co. 18	Cook's, Adam, Sons. 41	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	Triumph Electric Co. 59
Ball & Wood Co. *	Cook Well Co. 51	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Baltimore Engraving Co. 83	Corder, Edward. 32	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Baltimore & Ohio R.R. 53	Cordesman, Meyer & Co. 49	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Baltimore Steam Packet Co. 53	Cornell, J. B., & J. M. 19	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Barber, A. H., Mfg. Co. 37	Corrington Metal Roofing Co. 45	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Barnes, W. F., & John, Co. 41	Coryell, A. B. 32	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Barnett, G. & H., Co. 60	Cotton Oil & Fibre Co. 63	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Barrett Mfg. Co. 39	Coverly Mfg. Co. 4	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bartlett, Hayward & Co. 41	Cox, Justice, Jr., & Co., Ltd. 40	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bates, James, Sons. 24	Crescent Woodenware Mfg. Co. 38	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Beach, H. W. 48	Cresson, Geo. V., Co. 42	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Beardsley Gravity Dam & Con. Co. 54	Crippen, H. D. 43	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Behlen, Charles. 54	Crocker-Wheeler Co. 58	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Belmont Iron Works. 37	Crooked Fork Coal & Coke Co. *	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Benbow, W. C., Co. 36	Crosby Steam Gauge & Valve Co. 5	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Benjamin Iron & Steel Co. 40	Crown Dryer Co. 14	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Berryman, James. *	Crutchfield, J. H. 32	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bertach & Co. 40	Currant, Jas. H., Elevator Co. 25	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bealy, C. H., & Co. 40	Cutler Mfg. Co. 60	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bickford Drill & Tool Co. 41	Cypress Lumber Co. 37, 53	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bird, J. A., & W., & Co. 46, 47	Dallett & Co. 6	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bird, Wm. M., & Co. 8	Dart, E. M., Manufacturing Co. 50	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Birmingham Boiler Works. 13	Dart, E. M., Manufacturing Co. 50	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Birmingham Rail & Loc. Co. 39	Davis, F. H., & Co. 39	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Blakelee Mfg. Co. 25	Davis, G. M., & Son. 53	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Blanton, Jr., E. A. 42	Davis, Jno., Co. 23	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Blythe, Richard A. 32	Davis, O. W. 40	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Boggs, E. B. 35	Dawson, A. L., & Co. 38	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Boiler and Pipe. 35	Day, J. H., & Co. 38	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bolles, J. E., Iron & Wire Wks. 44	Dean Bros. Steam Pump Works. 54	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bonar, James, & Co. 32	Dehner-Wuerpel Mill Bldg. Co. 29	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bonneville Portland Cement Co. 32	Delaware Trust Co. 31	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Boomer & Boschert Press Co. 32	De Loach Mill Mfg. Co. 46	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bostedo Pneumatic Tube Co. 21	Denham, J. F. 39	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Boston & Maine Railroad. 53	De Ronde, Frank S., Co. 47	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Boston Belting Co. 27	Detroit Graphite Mfg. Co. 30	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Boston Blower Co. 10	Detroit Lubricator Co. 19	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bourse, The. 20	Diamond Machine Co. 60	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bowser, S. F., & Co. *	Dibble, S. 35	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bowser, N. P., Co. *	Diets, R. E. 59	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bradley Pulverizer Co. 43	Dixon, J. M. 56	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bradstreet Mercantile Agency. 52	Dixon, Jos., Crucible Co. 60	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Broderick, Fendick & Co. 32	Dodge Mfg. Co. 24, 37	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Brownell, Schmidt & Co., Ltd. 1	Dopp, H. Wm., & Son. 32	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Brown, A. & F. Co. 41	Dow Wire Works Co. 44	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Brown, J. Thompson, & Co. 32	Downman Mfg. Co. 46	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Brownell, The, & Co. 18	Dowale Pump Co. 58	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	
Bryan, Andrew J., & Co. 6	Draper Co. 50	Gen'l Incandescent Arc Light Co. 12	Lockwood, Greene & Co. 6	Pratt & Whitney Co. 41	

Mexican National Railroad Company Readjustment.

To the Holders of the Following Bonds and Stock of the Mexican National Railroad Company:

Six Per Cent. First Mortgage (Prior Lien) Gold Bonds due 1927. Six Per Cent. Second Mortgage Series "A" Bonds due 1917. Six Per Cent. Second Mortgage Series "B" Bonds due 1917. Six Per Cent. Income Mortgage Bonds due 1937. Capital Stock (Voting Trust Certificates).

The undersigned, representing large amounts of the various securities of the Mexican National Railroad Company, held by themselves and others, have made a careful examination of the affairs of the Company, and have, after consultation with an expert independent of the present management, reached the conclusion that the future prosperity of the road depends upon the changing of the gauge, and the making of necessary improvements, in order to establish a standard gauge main line from the City of Mexico to Laredo, Texas, as otherwise the railroad will probably lose most of its through traffic, and become almost entirely dependent upon its local business.

The expert estimates that the cost of making the main line standard gauge, and other necessary improvements, including the building of the El Salto extension, will amount to about \$10,200,000 United States currency; that within two years after these improvements are completed the net earnings of the road will amount to about \$4,000,000 Mexican currency, equal, at the present rate of exchange, to about \$2,100,000 United States currency, and that thereafter the net earnings will gradually increase from year to year.

A readjustment of the finances of the Mexican National Railroad Company therefore becomes necessary, in order to enable it to raise new capital to accomplish the above purposes and to provide adequate means for present and future requirements.

With these objects in view, the undersigned have formulated a Plan and Agreement of Readjustment, dated October 3, 1901, and have agreed to act as Readjustment Managers as stated therein. A Syndicate has been formed by the undersigned to provide all the cash requirements under the Plan.

The Plan of Readjustment has been approved by the Directors of the Mexican National Railway Company, Limited (of London), who hold on deposit a very large majority of the Mexican National Railroad Company 6 Per Cent. Second Mortgage Series "A" and Series "B" Bonds, and its acceptance has been unanimously recommended by them to their certificate holders.

The Plan of Readjustment provides for the creation of the following new securities:

First. \$20,000,000 Prior Lien 4½ Per Cent. Gold Bonds, Due 1926.

These bonds will bear interest from October 1, 1901, free of all taxes which the company may be required to pay or retain therefrom, and are to be secured by a Mortgage or Deed of Trust upon all the railroad, terminals and equipment of the Mexican National Railroad Company now owned, or of which it or the new company may become possessed through the expenditure of the fund provided for in this readjustment, and also upon the securities of the Texas Mexican Railway Company. Including the proposed El Salto extension, the mileage would consist of about 353 miles of standard-gauge track and about 452 miles of narrow-gauge track.

The right will be reserved to increase the above issue by an amount not to exceed \$3,000,000 for the general purposes of the Company under proper restrictions, but no bonds forming part of this increase are to be sold before January 1, 1904, except to meet any unexpected increase in the expenses in connection with making the road standard gauge and building the proposed El Salto extension.

The right will also be reserved to call in and redeem all or any part of the said Prior Lien Bonds upon six months' notice at 105 per cent. and accrued interest.

The Prior Lien Bonds are to be applied as follows:

In partial exchange for existing bonds.....	\$10,779,000
Purchased by Syndicate to provide cash requirements of Plan.....	9,221,000
	\$20,000,000

Second. \$15,000,000 First Consolidated Mortgage 4 Per Cent. Gold Bonds, Due 1951.

These bonds will bear interest from October 1, 1901, free of all taxes which the Company may be required to pay or retain therefrom, and are to be secured by a Mortgage or Deed of Trust upon all the railroad and properties covered by the Prior Lien Mortgage above mentioned, subject to the lien and conditions of that mortgage, and by a first mortgage lien on all property thereafter acquired or constructed, other than that acquired or constructed pursuant to this Plan.

The right will be reserved to increase the amount of these bonds by \$15,000,000, of which \$5,000,000 may be used for betterments and improvements of the railroad and properties covered by the first consolidated mortgage, or for the acquisition of equipment for use thereon, at the rate of not exceeding \$500,000 a year, and \$9,000,000 thereof for acquisitions of new property and for extensions at the rate of not exceeding \$10,000 per mile of standard-gauge line, or \$7500 per mile of narrow-gauge line, on which the consolidated mortgage will be a first lien.

The right will also be reserved to issue not to exceed \$23,000,000 of these bonds, in addition to said \$30,000,000 thereof, to retire, at or before maturity, an equal amount of the 4½ Per Cent. Prior Lien Bonds, bond for bond.

The First Consolidated Mortgage Bonds are to be applied as follows:

In partial exchange of existing securities.....	\$11,404,687 50
Purchased by Syndicate to provide cash requirements of Plan.....	3,595,312 50
	\$15,000,000 00

Third. \$25,000,000 4 Per Cent. Non-Cumulative Preferred Stock.

This stock will be entitled to receive non-cumulative dividends at a rate not to exceed 4 per cent. per annum, before the payment of any dividend on the common stock, but shall not be entitled to any dividends in excess of 4 per cent. per annum.

This stock will be applied as follows:

In partial exchange for existing securities.....	\$20,663,625
Purchased by Syndicate to provide cash requirements of Plan.....	1,000,000
In compensation for surrender of all rights of the Mexican National Construction Company, its successors or transferees, under their agreements with the Mexican National Railroad Company, heretofore acquired by Speyer & Co. and associates, purchased by Syndicate.....	1,400,000
	\$22,663,625
For contingencies (any surplus to new Company).....	1,336,375
	\$25,000,000

Fourth. \$33,350,000 Common Stock.

This stock will be applied in exchange for existing capital stock at the rate of dollar for dollar.

PROVISION FOR ACQUISITION OF MEXICAN INTERNATIONAL RAILROAD COMPANY.

The right will be reserved to issue, in addition to the bonds and stock above specified, not to exceed \$7,000,000 of the New First Consolidated Mortgage 4 Per Cent. Gold Bonds, and not to exceed \$7,000,000 of the New 4 Per Cent. Non-Cumulative Preferred Stock of the new Company, so as to provide means for acquiring securities of the Mexican International Railroad Company (which shall include at least a majority of the capital stock of that company) in case the Readjustment Managers or the New Company shall consider such acquisition advisable.

Provision is also to be made in the mortgages securing the New Prior Lien 4½ Per Cent. Gold Bonds and the New First Consolidated 4 Per Cent. Gold Bonds that, in case the Readjustment Managers or the New Company, after such acquisition of the controlling interest in the Mexican International Railroad Company, deem it advantageous to unify the bonded debts of the Mexican International Railroad Company and of the New (Mexican National Railroad) Company, the latter may issue such additional amounts of either or both classes

of its bonds as may be necessary for the purpose of taking up, bond for bond, the corresponding classes of the then existing mortgage bonds of the Mexican International Railroad Company.

VOTING TRUST.

In order to establish such control of the New Company as shall secure a satisfactory management of the property for a period of years, both classes of Stock of the New Company (except such Shares as may be disposed of to qualify Directors) shall be vested in three VOTING TRUSTEES, to be appointed on or before completion of Readjustment, by the Readjustment Managers for five years and for such further period (if any) as shall elapse before the Preferred Stock shall have paid 4 per cent. cash dividends per annum for two successive years, although the Voting Trustees, in their discretion, may deliver the Stock at an earlier date, as provided in the Trust Agreement. In the meanwhile the Voting Trustees are to deliver their Certificates in the usual form.

The basis of exchange of existing Securities is shown in the following table:

TABLE SHOWING AMOUNT OF CASH AND NEW SECURITIES DELIVERABLE IN EXCHANGE FOR DEPOSITED SECURITIES.

EXISTING BONDS AND STOCK TO BE DEPOSITED.	EACH \$1,000 WILL RECEIVE				
	Cash.	New 4½ Per Cent. Prior Lien Gold Bonds.	New 4 Per Cent. First Consolidated Mortgage Gold Bonds.	Voting Trust Certificates for New 4 Per Cent. Preferred Stock.	Voting Trust Certificates for New Common Stock.
Mexican Nat'l R. R. Co. 6 Per Cent. First Mortgage (Prior Lien) Gold Bonds, due 1927.....	\$30.00 † 15.00	\$1,000	.....	.....	.....
Mexican Nat'l R. R. Co. 6 Per Cent. Second Mortgage Series "A" Bonds, due 1917.....	† 21.88	.....	\$937.50	\$625	.....
Mexican Nat'l R. R. Co. 6 Per Cent. Second Mortgage Series "B" Bonds, due 1917.....	.....	.....	.....	\$900	.....
Mexican National R. R. Co. 6 Per Cent. Income Mortgage Bonds, due 1937.....	.....	.....	.....	\$300	.....
Mexican National R. R. Co. Capital Stock (Voting Trust Certificates).....	.....	.....	.....	.....	\$1,000

*Payable on the Plan being declared operative. †Provided they are deposited within thirty days from the date hereof. ‡Payable on completion of the Readjustment.

Non-interest-bearing scrip, exchangeable in round amounts for the new securities, will be issued for fractional amounts of New Bonds and Stocks.

First Mortgage 6 Per Cent. (Prior Lien) Gold Bonds, due 1927, must carry all Coupons or claims for interest on Registered Bonds) maturing on and after December 1, 1901.

Holders of MEXICAN NATIONAL RAILROAD COMPANY 6 PER CENT. FIRST MORTGAGE (PRIOR LIEN) BONDS, DUE 1927, deposited under the Plan, will, on the Plan being declared operative, receive in cash \$20 per bond of \$1000, being 6 per cent. interest thereon from June 1, 1901, to October 1, 1901, and also, provided they are deposited within thirty days from the date hereof, a bonus of \$15 per bond of \$1000 in addition to the bond to which they are entitled upon completion of the Readjustment as above stated. In connection with the accomplishment of the plan of Readjustment, the right to call in and redeem the said Mexican National Railroad Company 6 Per Cent. First Mortgage (Prior Lien) Bonds at par and accrued interest may be exercised.

Second Mortgage 6 Per Cent. Series "A" Bonds, due 1917, must carry all Coupons or claims for interest on Registered Bonds) maturing on and after March 1, 1891, (the latter Coupon half paid).

Holders of MEXICAN NATIONAL RAILROAD COMPANY 6 PER CENT. SECOND MORTGAGE SERIES "A" BONDS deposited under the Plan will receive, with the new securities upon the completion of the Readjustment, \$21.88 in cash per bond of \$1000, being equal to 4 per cent. interest from March 1, 1901, to October 1, 1901, on the face value of the new bonds, to which they are entitled as above stated.

The new bonds delivered under the Plan will bear interest from October 1, 1901.

POSITION OF THE NEW COMPANY.

(United States Currency.)

The annual fixed charges after readjustment (it is estimated) will be:

Four and a half per cent. on \$20,000,000 Prior Lien Gold Bonds.....	\$800,000
Four per cent. on \$15,000,000 First Consolidated Mortgage Gold Bonds.....	600,000
	\$1,500,000

The net earnings for the year ending December 31, 1900, were, according to the annual report of the Company.....

To which may be added items for capital and other extraordinary expenditures which had to be charged to operating expenses or against current income, but are properly chargeable to capital account, (according to the statement of the President of the Company, confirmed by Messrs. Price, Waterhouse & Co.).....	\$1,208,634
	363,932
	\$1,572,566

Estimated net earnings after the main line has been made standard gauge, the proposed El Salto extension built and other improvements accomplished, about.....

\$2,100,000

It thus appears that the fixed charges of the New Company will, on completion of the Readjustment, be well within the net earnings of the property.

Messrs. SPEYER & COMPANY of New York will act as DEPOSITARY, under the Plan, and Messrs. SPEYER BROTHERS of LONDON, and Messrs. TEIXEIRA DE MATTOS BROTHERS, AMSTERDAM, will act as their Agents in Europe for the purpose of receiving deposits.

ALL HOLDERS OF BONDS AND STOCK MAY DEPOSIT THEIR SECURITIES ON AND AFTER OCTOBER 14, 1901, either with Messrs. SPEYER & COMPANY at their office, 30 Broad Street, in the City of New York, or at the offices of their Agents, Messrs. SPEYER BROTHERS, 7 Lothbury, London, and Messrs. TEIXEIRA DE MATTOS BROTHERS, Amsterdam, and will receive Certificates of Deposit therefor.

Deposited securities will be placed with THE CENTRAL TRUST COMPANY OF NEW YORK, or its agents in Europe, AS CUSTODIAN.

Application will be made in due course to list such Certificates of Deposit upon the New York, London and Amsterdam Stock Exchanges.

Participation under the Plan of Readjustment in any respect whatsoever is dependent upon the deposit of securities as above within such time as may be fixed by the Readjustment Managers, and the Plan will embrace only securities so deposited. Copies of the Agreement and Plan of Readjustment are now ready for distribution, and all security-holders are invited to obtain them from the undersigned or their Amsterdam Agent, as all depositors are bound thereby, without regard to this circular, and the Plan and Agreement set forth in detail many features which it is impracticable to condense into this circular, but which are of much importance to security-holders.

We believe that the proposed Readjustment is fair to all interests and advantageous to the holders of the Bonds and Shares, and we urge prompt acceptance and deposit of the securities.

SPEYER & CO., NEW YORK,
KUHN, LOEB & CO., NEW YORK,
SPEYER BROTHERS, LONDON,

READJUSTMENT
MANAGERS.

NEW YORK, OCTOBER 12, 1901.

SPECIAL Advertisements OF GENERAL Interest.

OPPORTUNITIES FOR INVESTORS.

ADVERTISING RATES FOR SPECIAL ADVERTISEMENTS:

Inches.	1 time.	2 times.	3 times.	4 times.
1.....	\$ 1.75.....	\$ 3.00.....	\$ 4.25.....	\$ 5.00.....
2.....	3.00.....	5.50.....	7.50.....	10.00.....
3.....	4.25.....	7.50.....	11.75.....	15.00.....
4.....	5.50.....	10.50.....	15.00.....	20.00.....
5.....	6.75.....	13.00.....	19.00.....	25.00.....
6.....	8.00.....	15.00.....	21.50.....	28.00.....
1/4 page (13 in.)	16.00.....	30.00.....	40.00.....	50.00.....

Coal, Iron and Timber Lands.

Come to West Virginia.

Why? It has more and a greater variety of undeveloped resources close to Eastern and Western markets than any other State. The WEST VIRGINIA CENTRAL & PITTSBURGH RAILWAY penetrates the heart of the virgin timber forests and coal deposits. Cheap fuel, cheap raw material and unsurpassed railway facilities make that territory most desirable for manufacturing industries. For information in regard to timber and coal lands and manufacturing sites address

HOWARD SUTHERLAND,
Gen'l Land Agent, ELKINS, W. VA.

Mineral Lands

FOR SALE.

We will offer at public auction, in Staunton, Va., on November 7th, 1901, several bodies of land constituting the Guy's Run Iron Estate of Mr. E. A. Packer, in Rockbridge County, Va., about 17,335 acres or 27 square miles of territory, lying near Goshen Depot, 168 miles west of Richmond and the Rockbridge Alum Springs, and covering the Goshen Pass of the North River, with fine water power at numerous points and abundant timber, but chiefly valuable for its deposits of minerals, especially iron ores (red shale and brown hematites, adapted to the manufacture of basic steel and foundry irons) and manganese and palmit.

Lying in the Appalachian Belt near the coal fields and seaboard, with abundant outcrops of ore rudely developed, and adjoining or near the active operations at Victoria, Longdale, Lowmoor and Covington Furnaces, this is an exceptional opportunity for investments. The estate is subdivided into four lots. Terms, ten per cent. down and remainder in four annual payments.

Map and reports can be seen at the law offices of Ranson & Ranson, at Staunton, Va. Sale by Court Commissioners.

THOMAS D. RANSON, Staunton, Va.
WILLIAM A. ANDERSON, Lexington, Va.
GEO. PERKINS, Charlottesville, Va.

For Sale—From 3000 to 3500 Acres of TIMBER LAND

situated in Georgia, Orangeburg Co., S. C., near the South Carolina Road. About half of the tract is adapted for planting purposes, cotton, rice, corn, potatoes, sugar cane and tobacco, balance standing timber, within easy reach of Branchville and Bormantown. Apply to

S. DIBBLE, Orangeburg, S. C.
VANDERBILT & HOPKINS, 126 Liberty St., N. Y.

FLORIDA TIMBER.

40,000 acres saw mill timber, average 3,000 feet per acre. Lies along the Seaboard Air Line Railway. Easy logging, low freight rates to Gulf and Atlantic Port. Price \$1.25 per acre, includes land, contains considerable cypress.

Send for prospectus.
BROBSTON, FENDIG & CO.,
BRUNSWICK, GA.

Subscribe to the Manufacturers' Record.
Price \$4 a year, or six months for \$2.

Water Powers and Mill Sites.

FOR SALE.

40,000 Acres Round Pine Timber Lands.

Near S. A. L. Railway and Plant System, in Lake County, Fla. Easy terms.
S. LOGAN LANG, Camden, S. C.

ROANOKE NAVIGATION & WATER POWER CO. Weldon, North Carolina.

LESSORS OF Water Power and Electric Power.

Unrivalled location for
INDUSTRIAL ENTERPRISES
at Junction of Atlantic Coast Line and Seaboard Air Line Railway Systems.
Steamboat connection with Norfolk, Va.
12 hours' travel from New York City.
Operates Nine Miles of Canals and Electric Power Transmission Plants.

Price for Water Power:
\$15.00 Per H. P. Per Year,
24 Hours' Use Daily.
THIS INCLUDES BUILDING SITE.

Electrical Power;
\$15.00 PER H. P. PER YEAR,
20 Hours' Daily Use.

OTHER INDUCEMENTS:
Proximity to Raw Material and Market Centers.
Favorable Rates for Manufactured Products.
Free Building Sites.

Low Taxes, Exemptions, etc., etc.
Correspondence Solicited.

JAS. W. WILSON, President.

Magnificent Site for Pulp Mill, &c.

On Seaboard Air Line and river navigable 40 miles for light draft boats into a timber country untouched by railroads. Over 200 horse power available.

To the Manufacturer:

No sites for Cotton and Woolen Mills are more attractive or valuable than those to be found on the

Nashville, Chattanooga & St. Louis Railway.

The water powers are superb; coal for fuel convenient and low in price; the cotton fields almost within sight and sound of the water powers, with low rates on cotton from the various cotton markets to the mill sites (ask for tariffs) and the labor abundant, efficient and cheap. No more healthful region exists in the United States than that penetrated by the system of the Nashville, Chattanooga & St. Louis Railway. The water powers occur on numerous streams on the Huntsville & Sparta Division and on the Western & Atlantic Railroad, and range in dynamic force from 500 to 12,000 horse powers.

The prices of steam coal at the mills vary from \$1.00 to \$1.75 per ton. Labor is 25 per cent. cheaper than in the rigorous climate of the North, and finished goods may be transported to all markets, domestic and foreign, at rates as favorable as those accorded to other manufacturing districts in the United States. For descriptive pamphlets, maps, rates, etc., call on or address

J. B. KILLEBREW,
Industrial and Immigration Agent,
NASHVILLE, TENN.

Valuable Water Power For Sale at a Bargain.

Forty-Two Acres of Land, lying on both sides Little River at Bordeaux, S. C., on the Charleston & Western Carolina R. R., containing a new Four Room Cottage and Out-Buildings and partially developed Water Power, is offered now for \$5,000 cash. Just the site for a Yarn, Hosiery, Underwear or Cotton Mill. Available Power enough for a half-million dollar investment. Can be cheaply developed.

C. G. SAYRE, C. E., ABBEVILLE, S. C.

Miscellaneous Properties and Investment Opportunities.

West Pascagoula Creosote Works,

WEST PASCAGOULA, MISS.

Situated on Pascagoula Bay and on the line of the Louisville & Nashville Railroad. These works have been in operation for more than twenty years, were recently entirely rebuilt and enlarged, and are now prepared to execute all orders for Creosoted Piles and Timber thoroughly impregnated with dead oil of coal tar.

New cylinders 115 feet long. Capacity one million feet per month. Address

S. W. LABROT,
Supt. West Pascagoula Creosote Works,
WEST PASCAGOULA, MISS.

WANTED.

A middle aged A1 business man as **Manager of a Large Fertilizing Plant** about to be erected in the South. Must have had experience in the manufacture of fertilizer and fully understand the manufacturing of fertilizer, and have the cash to invest \$1000 in the common stock of the company and be able to give a guarantee indemnity bond in the sum of \$20,000 which the company will pay for. Salary for the first year \$5000. Give age and references. Enclose stamp for reply.

Address **STANDARD,**
Commercial Club Building, 21st St.,
BIRMINGHAM, ALA.

SALE OF FURNACE PROPERTIES.

On November 6th, 1901, we will sell at auction, at the Court House in Staunton, Va., all the properties, franchises and claims of the Victoria Furnace Company, under decree of winding up suit of stockholders, subject to lease expiring May 1st, 1902.

The plant, located in Rockbridge County and in the great iron belt of Virginia, has been recently improved by expenditure of over \$124,000, and embraces furnace near Goshen Station of Chesapeake & Ohio Railway, daily capacity about 150 tons, on 568 acre tract, some 4000 acres of mineral land, railroad and quarry rights, numerous buildings, and complete modern equipment for manufacture of pig iron.

Particulars can be obtained from the undersigned commissioners
ROBERT L. PARRISH, Covington, Va.
J. BALDWIN RANSON, Staunton, Va.

WANTED.

Salesmen visiting Mills, Factories and Supply Houses, to sell a well known Belt Lacing on a generous commission. Name territory desired and line now handled.

THE MALIN & CO.,
CLEVELAND, OHIO.

FOR LEASE.

SILURIA LIME WORKS, Siluria, Ala.

Established 1874. Capacity 4000 to 4500 barrels per month. Superior advantages to right man. Satisfactory reasons given for leasing. For further particulars apply to

C. L. O'NEAL, Calera, Ala.
Or DR. E. WAGNER, Montgomery, Ala.

Cotton Mill for Sale.

Anyone desirous of building a mill can find one just built, in a good locality; avoid much hard work and save \$20,000 by addressing "W," care Manufacturers' Record.

SOUTHERN INVESTMENTS.

Additional Capital Supplied.
Stock Companies Organized and Attractive Properties Financed.
Make a Specialty of Mining, Timber and Industrial Propositions.

Bank references furnished.
R. E. WATSON, Austell Building, ATLANTA, GA.

J. P. HORNADAY, Financial Agent & Corporation Counsel.

Southern Timber and Mineral Lands.
Industrial Properties & Investments.
Corporations Organized and Financed.

1007-8 Union Trust Bldg., Cincinnati, O.

COTTON MILL FOR SALE.

The Great Falls Mfg. Co. at Rockingham, N. C. has Brick Cement Dam, 150 H. P.; 4500 Lowell Spindles, 133 Looms, Brick Main and Picker Buildings, Brick Cotton Warehouse. Fully Equipped and ready to run. Now on 3-yard 36" brown sheeting and 30" drill. Over \$50,000 New Machinery Installed in 1896.

Will be sold to the highest bidder for cash at the Court House door on Monday, November 4th, 1901.

For complete information, address
W. N. EVERETT,
Receiver.

FOR SALE.

Hardwood Mill and Factory.

Well established and profitable Hardwood Mill and Factory situated 35 miles from New Orleans, La., on N. O. & N. E. R. R. and tributary to the finest body of oak and hickory in the South. This plant has a home market for its output of heavy log cart, cane cart, and other material at good prices. Trade of plant increasing 25 per cent. each year. The sugar sections of Louisiana consume, estimated, \$200,000 worth of cane cart material each season. Logs bought delivered at mill at low prices. Good boomage for logs and shipping facilities by rail. Will give possession on or before January 1st, next. Good reasons for selling. Address

F. M. WHITE, Agent, Pearl River, La.

Boiler and Steel Pipe Plant

FOR SALE.

Controlling interest in a large Boiler and Steel Pipe Mfg. Co., well located and doing a large profitable domestic and export trade. Reason for selling—party has other large interests claiming his entire attention. A great opportunity for a party with means and ability.

Address **BOILER-PIPE,**
Care Manufacturers' Record.

For Sale at a Sacrifice.

Complete 20,000 feet Saw Mill, one locomotive, two miles rail, 6000 acres pine timber, average 3000 feet per acre. Enough additional timber may be secured to operate ten years. Mill and timber located on Suwannee River. Good freight rate to Atlantic ports.

LIVE OAK MFG. CO., Live Oak, Fla.

If you are thinking of enlarging your mill, factory or mine, or of purchasing machinery of any kind, send the Manufacturers' Record a postal card giving the character of the machinery needed.

Towns Wanting Factories.

Cotton Mill Centre! "Cedartown, Ga."

Another \$100,000 Cotton Mill is announced for establishment at "CEDARTOWN, GA." This town is rapidly growing as a Textile Centre and new plants are constantly being built here. The product of the latest mill will be fine numbers of hosiery yarn.

Cotton and Knitting Mills, Stove Works, Machine Shops, Basket Factories, Agricultural Implement Works, Stores, Etc., are offered unexcelled opportunities.

"Cedartown, Ga."

has Water Works, Electric Light Plant and Underground Sewerage, Churches of all denominations and good Public Schools. For information, write

Cedartown Co., 119 S. 4th St., Phila., Pa.

Would
POWER
 At a fuel cost of
\$5.00 Per Year
 per ten-hour horse-power, be any attraction to you?
Wheeling, West Va.
 can do even better than that. For particulars, ask the
 Secretary,
Wheeling Board of Trade.

BUYERS of Machinery, Tools, Mining and
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 can find anything they need by referring
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MANUFACTURERS' RECORD.

SELLERS of anything that is required by
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 and Artisans of every class can reach more
 customers through the **MANUFACTURERS'**
RECORD than in any other way.
 BALTIMORE, MD.

Woodworking PLANTS WANTED

At a number of points in the South along
 the line of the

Southern Railway.

There are good openings for Woodworking Plants, such as FURNITURE
 FACTORIES, PLANING MILLS, SPOKE AND HANDLE FACTORIES, or other
 plants using pine or hardwoods. Local people will invest from \$6,000 to
 \$8,000 with an experienced man who will himself invest a like amount or
 more and do a legitimate business. For information write to

M. V. RICHARDS,
 Land & Industrial Agent, Washington, D. C.
 SOUTHERN RAILWAY.

Bargains in Machinery

FOR IMMEDIATE DELIVERY.

Four Locomotives

FOR QUICK SALE.

- 1 25-ton Standard Gauge Switcher, with slope back tender and air brake.
- 1 25-ton Standard Gauge, American Type with air brake; cylinders 14"x22".
- 1 18-ton 30" Gauge Saddle Tank; cylinders 10"x16"; four 36" drivers.
- 1 12½-ton 30" Gauge Saddle Tank; cylinders 9¼"x14"; four 28" drivers.

All in good running order.

THOMAS P. CONARD,
 119 S. Fourth St. PHILADELPHIA, PA.

FOR SALE. SECOND-HAND WOOD-WORKING MACHINERY.

- 14" Keystone Matcher.
- 14" Preble Matcher.
- 24x6 Weatherby, Rug & Richardson; 24x6 Hoyt Bros.; 8" S. A. Wood Fast Feed Matcher.
- 27x12 Endless Bed Surfer, S. A. Woods.
- 24x6 J. A. Fay Incline Bed Cabinet.
- 12" Inside Woods Moulder.
- 10, 8, 6 and 4" Outside Moulders, all makes.
- Greenlee Self Feed Saw, Saw Tables.
- 38 Rawley & Hermance Re-saw.
- 24 H. B. Smith Re-saw.
- Tenoners, Pony Planers, Mortisers, Jig Saws, Sanders, Gasoline Engines, Fans, Jointers, Lathes.

Blue prints of all machines will be sent upon application. Write and get our prices before buying.

PRICE MACHINERY CO.
 507 Great Northern Bldg. CHICAGO, ILL.

FOR SALE. BEAM ENGINES.

- 14"x22"; slide valve; outboard bearings; dia. of crank shaft, 5"; flywheel, 7' 2" diam.; driving pulley, 4' 2" dia.; 20" face.
- 12"x18"; slide valve; outboard bearing; dia. of crank shaft, 4½"; flywheel, 5' 6¾" dia.; driving pulley, 3' 6" dia.; 16" face.
- 12"x18"; rotary valve; outboard bearings; dia. of crank shaft, 4¾"; flywheel, 5' 9" dia.; driving pulley, 4' dia.; 14" face.

All in good order. Full particulars given. May be seen in N. Y. City. Address
 Chief Engineer,
CONSOLIDATED GAS CO. OF N. Y.
 4 Irving Place, New York City.

SECOND HAND Electrical Machinery

BOUGHT AND SOLD.

Correspondence solicited.

THOMPSON, SON & CO.
 107 Liberty Street, NEW YORK.

HIGH SPEED ENGINE BARGAINS.

No.	H.P.	Maker.	Cylin.	Speed.	Whls.
2	150	Buckeye "C"	14½"x16	240	7½x15
4	150	Westingh'ge	13½"x22x13	290	
1	125	"	11½"x19x11	300	
2	75	"	12x11	300	
1	75	N. Y. Safety	12x12	300	
1	65	Russell Aut.	10x14	275	
1	50	Atlas "B"	10x12	300	
1	40	Arm. & Sims	8½"x12	300	

CAMP ENGINEERING CO., 47 W. Lake St., Chicago, Ill.

SECOND-HAND.

We have a number of Dynamos and Motors, which we have displaced with larger units. These are all overhauled and guaranteed to be in good working order before shipping. The prices are very moderate indeed.

Your correspondence is solicited.

THE W. C. BENBOW CO.
 Manufacturers' Agent, COLUMBUS, OHIO.

FOR SALE.

Second-hand Corliss Engines,
 100, 150, 200, 350, 500 and 800 H. P. Boilers, all sizes. Steam Pumps in great variety. Send for bargain list of second-hand machinery.

S. L. HOLT & CO.
 67 Sudbury Street, BOSTON, MASS.

FEED-WATER HEATERS

2nd-Hand 80, 160 and 250 h. p. Berry-mans, 200 h. p. Goubert, 150 and 600 h. p. Wainwrights, 500 h. p. National, 600 h. p. Stillwell-Bierce Open Heater. All guaranteed. **F. L. PATTERSON, Havemeyer Bld'g, N. Y.**

STEAM ENGINES.

- 1 20" and 36"x48" Tandem **HAMILTON** Corliss, wheel 22"x56" face.
- 1 18 and 38x48 Tandem Corliss, wheel 22" diameter x 50" face.
- 1 36x72 Wheelock.
- 1 30x72 Wheelock.
- 1 30x60 Harris Corliss right and left hand wheels, 58" face by 20 ft. diameter.
- 1 24"x48" Bates Corliss.
- 1 20"x48" Geo. H. Corliss.
- 1 18x48 Greene.
- 1 16"x24" Harris Corliss.
- 1 12 and 20x12 Westinghouse Compound.
- 1 16 in. and 27 in. x16 in. Westinghouse compound.
- 1 13"x12" Erie Ball.
- 1 12"x12" Ball automatic.
- 1 13 in. x14 in. Watertown automatic.
- 1 14 in. x13 in. Armstrong & Sims automatic.
- 1 15½ in. x16 in. New York safety automatic.
- 1 15½ in. x15 in. Armstrong & Sims automatic.
- 1 16 in. x16 in. Ball automatic.
- 1 18½x18 in. Ideal automatic.

BOILERS.

- 2 375 H. P. Sterling water tubes for 150 lbs.
- 7 125 H. P. Ames Return Tubulars.
- 3 135 H. P. Vertical Manning.
- 2 500 H. P. Hazelton boilers.

CONDENSERS.

- 1 300 H. P. Conover Condenser.
- 3 325 H. P. Davidson condensers.

Railway Generators.

- 4 300 K. W. M. P. 4. General Electric.
- 3 100 K. W. M. P. 4. General Electric.
- 2 111 K. W. M. P. 4. Westinghouse.
- 4 60 K. W. Edison bi-polar.

MOTORS.

- 110, 220, 500-volt motors, from 1 H. P. to 200 H. P.
- ALSO
 ALTERNATORS,
 ARC DYNAMOS,
 LAMPS, STREET-CAR, ETC.

ROSSITER, MacGOVERN & CO.

Electrical and Steam Machinery,

141 Broadway, N. Y. Factory, Jersey City, N. J.

SEND FOR NEW CATALOG.

A NEAT PLANT!

10 H. P. Gasoline Engine.
125-Light Sprague Dynamo.

In daily operation. CHEAP FOR CASH.
 Suitable for Factory or Private Dwelling.

McCAY ENGINEERING CO.

107 E. Baltimore St., BALTIMORE, MD.

MENDEL'S MACHINERY EXCHANGE,
 26 East Balderston Street.
 FOR SALE CHEAP—All sizes STEAM AND GAS ENGINES, 50-H. P. LOCOMOTIVE, 60-H. P. HORIZONTAL, 100, 40, 25, 15, 9 AND 4-H. P. VERTICAL BOILERS, 22x30 150-H. P. FARQUHAR PISTON VALVE ENGINE, 5-H. P. VERTICAL ENGINE AND BOILER combined, 20-H. P. HOISTING ENGINE, OTIS 25-H. P. STEAM ELEVATOR ENGINE, POWER WORM-GEARED FACTORY ELEVATOR, TWO REVOLUTION AND DRUM CYLINDER PRESSES, JOB PRINTING PRESSES, all sizes and makes; complete STEREOTYPE OUTFIT, 42" HOE POWER PAPER CUTTER, Sheridan Extra Heavy Toggle Joint SMASHING PRESS, Lot of TYPE, IMPOSING STONES, STANDS and CASES, large lot of standard makes of PRINTING INKS at ¼ price, WOODWORKING MACHINERY, SHAFTING, BELTING, PULLEYS and HANGERS. Always positive bargains at MENDEL'S MACHINERY EXCHANGE, 26 E. Balderston St., near Light.

Largest Assortment. Immediate Delivery.
 Send for Catalogue.

- 1 30"x60" Greene Engine.
- 1 28"x48" Hamilton left-hand Corliss Engine.
- 1 26"x48" Greene Engine.
- 1 16½"—32"x36" Fitchburg Cross Compound.
- 1 14½"—28"x28" Cross Compound Fitchburg.
- 1 13"—20"x16" McEwan Tandem Comp. Engine.
- 1 17"x30" Williams Automatic Engines.
- 1 16"x24" Beck Automatic Engine.
- 2 15½"x15" Armstrong & Sims Engines.
- 1 15"x30" Buckeye Automatic Engine.
- 1 14"x15" Ideal Engine.
- 1 12"x12" Armstrong & Sims Engine.
- 1 10"—18"x12" Ball Tandem Compound Engine.
- 14 Water Tube Boilers, 15 to 200 lbs. steam pres.
- 22 Horizontal Tubular Boilers.
- Several full Railway Equipments.
- Large stock of Machine Tools. Let me know your wants.

FRANK TOOMEY,
 127-131 N. Third Street, PHILADELPHIA, PA.
 Long Distance Telephone 261-262.

FOR QUICK DELIVERY.

18", 22", 24", 26", 28", 30",
32" and 36" Lathes. Any length.

SOHUMAHER & BOYE,
Cincinnati, O.

FOR SALE.

Root Blowers, Nos. 1, 2, 3 and 6.
Sturtevant Blowers, Nos. 3, 5 and 7.
Sturtevant Steel Plate Blowers, 30 and
60-inch with Heaters. All complete,
nearly new.

A. ASHER, 123 Liberty St., cor. Greenwich,
NEW YORK.

Second-Hand

MACHINERY

For Immediate Delivery.

1-14" Gisholt Turret Lathe.
1-No. 2 Jones & Lamson Screw Ma-
chine.
1-18"x7" Engine Feed Brass Finishers'
Turret Lathe.
1-20"x7" Engine Feed Brass Finishers'
Turret Lathe.
1-48"x24" Triple geared Engine Lathe.
1-20"x21" Engine Lathe, taper attach-
ment.
1-18"x11" Engine Lathe.
1-36"x36"x7" Sellers Planer with side
head.
1-34"x34"x10" Pratt & Whitney Planer.
1-30"x30"x10" Pratt & Whitney Planer.
1-24" Cincinnati Shaper, Crank.
1-10" New Haven Shaper, Crank.
1-14" Bement traverse head Shaper.
1-20" Single Belted Surfer, J. A. Fay
& Co.
1-8" Hand Jointer, Williamsport Ma-
chine Co.
1-36" Rowley & Hermance Band Saw.
1-38"-No. 2 J. A. Fay Band Saw.
1-42"-No. 1 J. A. Fay & Co. Resawing
Band Saw.
1-J. A. Fay & Co. Automatic Railway
Cut-off Saw.
1-6" Triple Drum Sander, Berlin Ma-
chine Co.
1-Combination Saw Table and Dado
Machine, Williamsport Mch. Co.
1-5"x9" Sash and Door Clamp.

U. Baird Machinery Co.

123-125 Water Street,

PITTSBURG, PA.

Second-hand Machinery for Sale.

One marine steel fire box boiler 10 feet long, 73
inches diameter.
Eight cylinder boilers, 36 inches diameter, 36 feet
long.
One invincible three-roll 42-inch sander.
One Lane & Bodley engine, 14x20.
One smoke stack.
One single cylinder slide valve 15 H. P. hoisting
engine.
One balanced slide valve engine, 45 H. P.
One Wm. E. Hill & Co.'s drag saw.
One moulding machine.
One surfacer. One panel planer.

THE CYPRESS LUMBER CO., Apalachicola, Fla.

FOR SALE.

1 Fairbanks Gasoline Engine (30 horse power).
This engine is new and complete in every particu-
lar, including a 40-gallon galvanized tank, 1 box
batteries, fixtures, piping, belting, and an extra
55-gallon galvanized gasoline tank. Will sell at
a great bargain. 1 Steam Fire Engine, late from
Baltimore department. 4 Hoisting Engines, 12,
15, 18 and 25-horse power respectively. A number
of single and duplex Steam Pumps. Clusters,
Deck and Deep Well Pumps (new). General ma-
chine work and repairing. I make a specialty of
repairing Steam Pumps, High-speed and Gasoline
Engines.

W. W. KIRK,
406 E. Pratt St., Baltimore, Md.

FOR SALE.

One 10x12 Straight Line Automatic Engine.
Two 10x14 Sub-Base Buckeye Automatic Engines.
One 14x24 Buckeye Automatic Engine.
One 11x15 Sub-Base Taylor-Beck Auto. Engine.
One 50 h. p. Woodbury Automatic Engine.
One 14x20 Russell Automatic Engine.
One 12x36 Hamilton Corliss Engine.
One 18x48
One 20x48 Wheelock Corliss Engine.
One 20x48 Frick Corliss Engine.
Send for Catalogue of machinery nearly new.
WORTON & COLE MACHINERY CO., Cincinnati Ohio

2D-HAND BERRYMAN HEATERS.

all sizes. Taken in trade for our Improved
Berryman. In perfect order. Tested and
guaranteed. Prices reasonable. BENJ. F.
KELLEY & SON, Makers, 91 Liberty St., N. Y.

BARGAINS IN

Machinery and Supplies

No. ENGINES.

375. 13x12 Ball automatic.
60. 13x34 Putnam basin bed auto. engine.
75. 20x30 slide valve.
76. 18x28 Nicol-Burr.
1044. 16x28 slide valve.
133. 16x24 slide valve.
137. 6 8x12 center crank Tift engines.
138. 6 9x12 center crank Tift engines.
148. 12x20x12 Westinghouse engine.
163. Cross compound Armstrong & Sims, 13½
x20½x15.
173. 13x34 Fitchburg engine.
193. 1 New York Safety auto. 11x12.
193. 12x12 Armstrong & Sims automatic.
206. 14x24 slide valve.
210. 11x10 Westinghouse.
213. 12x24 slide valve.
217. 15x16 Ball automatic.
219. 11x20x14 McEwen tandem comp.
220. 11x9x11 Westinghouse engine. 13x22x13.
222. 14x24x14 Westinghouse engine.
223. 23x36 Wright-Corliss engine.
226. 9x8 Westinghouse.
235. 20x40 Nordburg.
297. 8½x10 Taylor-Beck automatic.
299. 1 pair Williams auto. engines, 500 H. P.
750. 5x4 Westinghouse, Jr.
846. 1 6x7 vertical automatic.
851. 1 7x7 horizontal automatic.
089. 18x30x16 Westinghouse.
047. 22x60 Harris-Corliss.
010. 16x36 Hoffman & Billings Corliss.
a1. 10x14 center crank, slide valve.
a2. 10x15 center crank, slide valve.
a3. 11x16 center crank, slide valve.
a4. 11x14 center crank, Atlas.
a5. 9x12 center crank, Erie City.
a6. 18x24 side crank, Atlas.

No. GASOLINE ENGINES.

154. 2 50 H. P. Otto gas or gasoline.

No. HOISTING ENGINES.

810. 10x16 double drum, double cylinder Mundy
hoisting engine.
755. 11x18 double drum, double cylinder Mundy
hoisting engine.
753. 8½x12 double cylinder, single drum hoist-
ing engine.
377. Locomotive boiler with hoisting rig at-
tached.
106. 8x12 Webster, Camp & Lane double cylin-
der, single drum.
6x10 single cylinder vertical engine and
boiler.
55. 8x12 single cylinder hoisting engine and
boiler.
77. 5x7 elevator hoisting engine, double cyl-
inder, with worm gear.
33. 1 elevator hoisting engine, 7x10, double
cylinder.
174. 8x12 double cylinder hoisting engine, belt
driven.

No. ELECTRICAL MACHINERY.

812. 1 30-light arc dynamo.
813. 1 45-light arc dynamo.
814. 1 50 K. W. Westinghouse alternator.
816. 1 50-light arc dynamo.
818. 1 electric elevator hoist with dynamo, on
one base, complete.
820. 1 60 K. W. Ft. Wayne alternator.

No. BOILERS.

666. 75 H. P. Heine safety boiler.
664. 48x12 tubular, no dome.
469. 4 54x15, no dome.
064. 175 H. P. Heine water tube.
005. 120 H. P. Sterling water tube.
006. 54x14, tubular.
675. 48x12 tubular, no dome.
676. 60x12 vertical fire box.
681. 66x12 vertical fire box.
686. 66x16 tubular.
688. 66x18 tubular.
695. 48x10 vertical fire box.
702. 48x10 vertical fire box.
704. 60x16, no dome, tubular.
708. 60x14 tubular.
711. Marine fire box, 15 H. P.
716. 4 72x20 tubular, no dome.
719. 100 H. P. internally fired.
580. 15 H. P. water-tube marine boiler.
580. 20 H. P. water tube marine boiler.
007. 1 80 H. P. locomotive fire-box boiler.
008. 1 100 H. P. locomotive fire-box boiler.
009. 50 vertical, from 2 to 20 H. P.
010. 20 locomotive fire-box boilers from 10 to
40 H. P.
081. 200 H. P. internally fired marine.
082. 125 H. P. Locomotive fire box.

No. PUMPS.

201. Deep well pumps, 6x18, 10x36.
225. Worthington duplex compound, 8x12,
8½x10.
231. Worthington duplex compound, 10x16,
10½x10.
295. 5 hand power Diafra bilge pumps.
x 1. 4 centrifugal pumps, 16" suction, 12" dis-
charge.
x 2. 24x12x24 Gordon duplex pump.
354. Vertical centrifugal pump, 3 in. discharge.
366. 1 Knowles 7½x7x10 single acting pump.
895. 7½x5x10 single acting pump.
893. Deane single acting 7x6x8 pump, fly wheel
type.
888. 1 Smith-Vaile 10x6x12 pump.
928. 1 vacuum pump, 6x10x12.
933. 1 Worthington single acti n 7x6x8 pump.
890. 1 Norwalk pump, 10x5½x12.
882. 1 Norwalk pump, 11x7x16.
881. 1 Crane crank and fly wheel pump.
883. 1 Blake triplex, 8x6x9 pump.
930. 1 fire pump, 12x7x10.
934. 1 Worthington single acting 16x7x10
pump.
879. 1 Knowles single acting No. 5 pump,
7x4½x9.
924. 1 Worthington duplex pump, 9x5½x10.
925. 1 Gordon duplex, 9x5½x10.

No. AIR COMPRESSORS.

337. 1 straight line steam driven air compress-
or, made by National Drill & Compressor
Co., 20x22x24.
890. 1 5½x7x10 Norwalk air compressor.
896. Hall duplex air compressors, steam driven,
10x12x12, 6x8x8 and 8x10x10.
1 Hall duplex belt driven air compressor,
6x6.
902. 1 Hall duplex air compressor, 7x8x9.

No. IRON WORKING TOOLS.

3. 1 screw punch, hand power, punch holes
½ to 3-in.
16. 2 circular band saws, 8-in blade.
68. 1 8-in. Fay re-saw.

100. 1 hydraulic tank riveter.
239. 2 iron planers, 18x18x5, 18x18x6.
1 double spindle drill press. Pratt & Whit-
ney.
2. 1 horizontal automatic boring bar, will
bore cylinder 24-in.
4. 18x18x4 iron planer.
128. 1 horizontal milling machine.
236. 1 iron planer, 34"x12 ft. long.
256. 1 iron planer, 20x20x4 ft.

No. MISCELLANEOUS.

8. 1 hand lever gap shear.
15. 1 hand power sidewalk elevator hoist.
19. 2 Raymond ore crushers and pulverizers.
33. 24-in. Jones turbine water wheel.
35. 30-in. " " "
59. 1 hand fire engine on wheels.
70. 2 wire straighteners.
321. 1 Hotchkiss belt driven hammer.
330. Buffalo jet condenser—200 h. p.
843. 75 5-in. fire plugs.
294. 1 Wells light.
301. 1 small Wells light.
326. 1 ¾ in. Worthington water meter, also a
3-in. meter.
339. 1 set plate rolls, geared—38-in. wide.
365. Hot blast apparatus with direct connected
fan and engine.
378. 1 Gates stone crusher.
756. 1 Niagara power shear—4½-ft. knife.
835. 1 spur gear wheel, 12 ft. 8-in. diam., 16-in.
face with pinion.
841. 1 hydraulic press.
635. 1 power rattle.
834. 1 Rogers locomotive.
No. 9 cupola blower.
351. 1 Buffalo blower, No. O, direct connected
water motor.
052. 100 steam traps, from 4 to 12-in. diam.
844. 5-ton locomotive traveling crane.
744. 10-ton locomotive traveling crane.
083. Bullock champion prospecting dynamo,
core drill, complete.
084. Tank 75"x50 ft.
085. 12 iron columns 50 ft. long x 18" diameter;
made of channels

ICE MACHINES.

15-ton Murray, 30-ton refrigeration.
40-ton DeLaverne.
35-ton Allis.
50-ton Boyle.
25-ton Lindy.

ROOFING GLASS.

50,000 ft. ribbed and ugh new roofing glass, 18
to 50 inches wid

No. ODDS AND ENDS.

030. 2000 ft. of 1¼-in. wire cable.
031. 500 ft. of 2¼-in. cable.
032. 1000 ft. of 2¼-in. cable.
033. 1000 ft. of 1¼-in. galvanized guy rope.
504. Fly wheel, solid rim, 10-in. diam., 10-in.
bore, rim 9-in. face.
500,000 ft. of standard black wrought iron pipe,
from ½ to 12-in. diam.
5 carloads of steel sheets, from 8 to 16 gauge.
All kinds of plumbing material, including bath
tubs, lavatories, sinks and closets.
We carry a complete stock of hardware, includ-
ing such items as horseshoes, horseshoe nails,
hammers, hatchets, axes, handles, &c. Also
just received 5 carloads of wire nails.

OUR CATALOGUE No. 239 contains an itemized and complete
list of our stock on hand.

Chicago House Wrecking Co.

W. 35th and Iron Streets, CHICAGO.

STRUCTURAL IRON WORK

For Immediate Delivery.

EYE BEAMS, from 3 in. to 20 in.
CHANNELS, from 1½ in. to 15 in.
ANGLES, 1 in. to 6 in.
FLATS & BARS up to 20 in. wide.
ROOF TRUSSES, GIRDERS, COLUMNS,
and BRIDGES designed and built.
Bridge Railings a Specialty.

BELMONT IRON WORKS
PHILADELPHIA, PA.

For Sale—Engines, Boilers, Dynamos, &c.

1 700-light Dynamo, 110 volts, \$325. Also
some smaller dynamos down to 30-light machines.
Engines—1 50 H. P., \$300. 1 100 H. P., \$425.
1 125 H. P., \$600. 2 150 H. P., \$750 each. 2 350
H. P., \$2250 each. Also some others. Feed Water
Heater, Berryman, about 700 H. P., \$250. Alter-
nating Dynamos—600-light, \$285. 2 1300-light,
\$385 each. Boilers, Pulleys, Pipe Shafting, etc.
Some big bargains. Generator—100 K. W., 550
volts, slow speed, \$675.

American Electric Supply & Mfg. Co.

72 Thames Street, NEW YORK CITY.

FOR SALE.

No. 3 DECK SCOW 100'x29'x9'8"
No. 5 DECK SCOW 111'4"x32'11"x10'
3'
No. 4 DERRICK SCOW 101'x31'x10'
FLOATING PILE DRIVERS
No. 2 42'4"x20'4"x4'4" No. 3 55'8"x
20'10"x5'0" No. 8 50'0"x23'0"x6'
3' No. 9 50'9"x22'6"x4'2"
2 OSGOOD DREDGES

FOR SALE—New or Second-Hand
STEEL

RAILS

Light or heavy Section. In carload lots or larger quantities. We buy old rails.

Robinson & Orr, 419 Wood St.,
Pittsburg, Pa.New and Second-hand
MACHINERY.Hoists and Hoisting
Engines.

11x15" double cylinder, double drum;
8½x10" double cylinder, 4 drums, for
hoisting and swinging derrick; 7½x
10", two 6½x10" with boiler; 5½x7"
double cylinder, double drum with
boiler; 8½x10" double cylinder, single
drum; 8½x10" single cylinder, single
drum with boiler; 8½x10" double cylinder,
double drum, 4 spools, erectors
engine; 6x12 single cylinder, single
drum with boiler; 7x10" and two 6½x8
double cylinder, double drum.

Locomotives.

One 10x16 Porter, 3 ft. gauge, 4 wheels,
with tender; one 9x16 Vulcan, standard
gauge, saddle tank.

Contractors' Machinery.

13-ton Columbia Steam Road Roller.
30 ft. gauge 3-yard K. & J. and other
Dump Cars.
1000 foot span Lidgerwood Aerial Cable-
way.

Wood Working Machinery.

21" Fay Planer and Matcher.
7" Houston four-sided Mould'g Machine.
8" Butler Sticker; there are two.
Butler Tennon Machine.
Smith Sash and Door Tennon Machine.
Walker Self-feeding Panel Raiser.
Fay Single Spindle Shaper.
Foot Power Mitre Machine.
Jig Saws, Wood Lathes.

Steam, Gas and Gasoline Engines, Boil-
ers and Electrical Machinery.

Carlin Machinery
& Supply Co.,

Lacock & Sandusky Sts.,
Allegheny, Pa.

EQUIPMENT FOR SALE.

CASH OR EASY PAYMENTS.

Locomotives, box, flat, gondola and logging
cars, standard and narrow gauge; Climax geared
locomotives, all gauges.

Write for description and prices.

Special Bargains.

South Side Alley L engines, \$250 each; 34-foot
standard gauge flat cars, 42-ton standard gauge
Mogul locomotives, 25-ton standard gauge box
cars. Several iron truss bridges, spans from 30
to 100 feet.

F. M. PEASE, Incorporated,
355 Dearborn St., Chicago, Ill.

ENGINES.

25"x43" Wright Corliss.
14"x30" Horizontal Slide Valve.
10"x20" Supplee Horizontal.
8"x7" Upright Yoke Engine.
4½"x7" Upright Oscillating.

For sale cheap. For further particulars and
prices apply to

POULTERER & CO.

410 Bullitt Building, PHILADELPHIA, PA.

BIG BARGAINS.

General Electric, Inductor Motors

1 15-H. P. 110 volt, speed 900, price \$350.00
1 30-H. P. 110 volt, speed 900, price \$550.00
1 75-H. P. 350 volt, speed 600, price \$1100.00
Chicago delivery, ready to ship. Hundreds of
other bargains in stock. GUARANTEE ELECTRIC CO.
133 S. Clinton St., CHICAGO.

Chas. E. Gregory, President.

One Heavy, Stearns best make Car-
riage, HUNK and SAW, practically
new, for sale cheap.

STAR LUMBER MILLS,
Solisville, N. Y.

Engine Bargains

100 h. p. 12x24 Buckeye Automatic.
100 h. p. 12x20 Rice Automatic.
150 h. p. 16x42 Fraser & Chalmers Corliss.
150 h. p. 14x30 Cummer 4 valve Automatic.
250 h. p. 12x22x18 Payne Tandem Cpd. Auto.
65 h. p. 12x24 Cooper Slide Valve.
50 h. p. 12x18 Slide Valve.
14x7x10 Smith-Vaile Fire Pump.
200 h. p. Baragwanath Heater.
45 h. p. 11½x18 Slide Valve.
60x16 ft. Tubular Boiler.
200 h. p. Stillwell-Bierce Heater.

The above are all in first-class condition and
ready for shipment.

A. L. DAWSON & CO.,

27-31 W. Washington St., CHICAGO, ILL.

Contractors' Outfit

FOR SALE.

1 1000-ft., 1½-in. Sherman Cableway, with Lam-
bert engine, complete.

Stiff Leg, Guy and Breast Derricks, hand and
steam power.

Traveling Derrick, Byer's.

Concrete Mixer, power.

Horizontal Boiler, 40 H. P.

"New Ingersoll" Drills R 9, new and second-
hand.

Pile Driver, Bucyrus Dredge.

Austin "New Era" Graders and Dump Wagons,
slightly used.

Wheel and Drag Scrapers, used less than one
month.

Horse and Mule Harness.

Pipe Fitting and Machine Shop Outfit.

Plows, Shovels, Small Tools, etc.

Machinery located at Trenton Falls, N. Y.;

Rome, N. Y., and Wyoming, Ill.

For particulars, enquire of

The Warren-Burnham Co.,

81 Fulton St., New York City.

Bargains in Machinery.

One 20x40x36 Wright-Corliss Tandem Compound
Corliss Engine, with pulleys 18"x42" face and
16"x32" face.

One 18½x34x41 Fitchburg Tandem Compound
Engine, with pulley 18"x40" face.

One 18x32 Porter-Allen Engine. Also several
others from five horse power up of different
styles.

Five 16x24 Standard Gauge "American Type"
Locomotives.

Also "CONTRACTORS' PLANTS for sale or
rent."

Correspondence solicited.

GRANT & WILLIAMS,

Park Row Building, NEW YORK.

New and Second-Hand

Iron Tools and Woodworking Machinery

Corliss and Double Valve Engines for Trolley
Roads and Electric Lighting Stations.

H. C. BAKER & CO.,

114 N. 3d Street, Philadelphia, Pa.

FOR SALE.

Three Roots' Rotary Pressure
Pumps.

Capacity from Eight to Thirteen Thousand
Gallons per Minute.

Reference, Mr. Frank Klepetko, Butte, Mont.

P. H. & F. M. ROOTS CO., Connersville, Ind.

FOR SALE.

Lot of Boilers, Engines, Lathes,
Planers, Drill-Presses, 1 Large Fire
Pump, Steam Pipe, all sizes, and about
500 Tanks of different sizes.

WILLIAM ECKBOLD'S SONS,

711 E. Girard Ave. PHILADELPHIA, PA.

FOR SALE.

One second-hand "BERRYMAN" HEATER
AND PURIFIER, in perfect condition and guar-
anteed good as new. Will sell cheap for cash.
Address

M. F., care Mfrs. Record,
Baltimore, Md.

FOR SALE.—Cleveland, Windsor, Garvin
Screw Machines, Power Presses, Tapping
Machines, Surface Grinder, Annealing Furnaces,
Jewelers' and Slitting Rolls. Good condition.

THE ATLAS CO., Lincoln, N. J.

For Sale—ENGINES.

3 Van Dusen Gasoline, 25 h. p. each. 1 to h. p.
Otto Gas Engine. All in good condition and
cheap. The J. H. DAY CO.,
1144 Harrison Ave., Cincinnati, O.

FOR SALE.

Second-Hand Boilers, Engines and Pumps.

17 Standard Tubular Boilers, ranging
from 50 to 150 H. P., single and in
batteries.

14 Engines, ranging from 10 to 700 H. P.,
Corliss Automatic and Slide Valve.

8 Steam Pumps, compound and duplex.

Large assortment of Generators, Wood-
working Machinery, etc.

WISCONSIN MACHINERY CO.

125-127 W. Water Street, Milwaukee, Wis.

FOR SALE.

Complete Picker Stick Machinery.

40 H. P. Atlas Automatic Center Crank Engine.
50 H. P. Atlas Boiler.

Defiance Battery Saw.

Sturteant Blower, engine attached.

No. 3 Williamsport Single Surfer.

Williamsport 16" Hand Jointer.

Williamsport Horizontal Borer.

Wright's 30" Band Saw Machine.

Fay & Egan 18" Sand Belt Machine.

4 Rip Saws, Dry Kiln Trucks, Shafting, Pulleys
and Belts. All as good as new.

Correspondence invited.

UNION HARDWARE MFG. CO.

UNION, S. C.

Steam Engines and Boilers
FOR SALE.

One Brown Engine, 18x42; one Erie Ball, 13x12;
one 15x14 Straight Line, with 1600-lb. generator
connected; one Westinghouse, 25 H. P., with 250-
light connected with belt; one Compound McIn-
tosh & Seymour, 250 H. P. connected, with two
generators 2000-light each, vertical; one Shaving
Press for baling shavings.

J. M. MASON & CO.

81 Haverhill Street, BOSTON, MASS.

2nd Hand, good as new,
AUTOMOBILES
all makes styles and
prices. Get our new 48
page Cat. Send stamp.

A. L. DYKE, Linmar Bldg., St. Louis, Mo.

Traction Excavator
10,000 Yard Capacity.

NEW PATENT FOR SALE.

Dated Sept. 17, 1901. No. 682,562.

Copies of patent and information sent on request.

H. H. SCHENK, Patentee,

Memphis, Mo.

FOR SALE.

ROCKY MOUNT, N. C., Oct. 25th, 1901.

By Acetylene Gas Co., in part or as a whole,
five Iron Gas Tanks and Generators, eighty Iron
Lamp Posts and Lanterns, about six miles of
Black Pipe, sizes ½ to 1½ inch (now in ground),
all in fair condition. Can be used as gas plant or
other purposes. Sold to highest bidder or pri-
vately.

FOR SALE.—Band Saw, Scroll Saw, 7" and
14" Floorers, Circular Re-Saw, E. B. Sur-
facer, Stationary Bed Planers, Planers and
Matchers, Du Four Picket Header, Shapers,
Moulders, Aut Knife Grinder, "Doig" 8 Tube
Aut. Nailer, Blind Flat Tenoner, Blind Stile
Mortiser and Borer, Knife Balance, Swing Saw,
Lathes, Shaving Fans. Cash buyers for new or
re-manufactured wood-working machinery, can
save money by writing to

C. C. HARRIS, 717 N. 2nd St., St. Louis, Mo.

Five-Ton Complete ICE-MAKING PLANT
FOR SALE.

Consisting of Geo. F. Blake Mfg. Co. Steam
Driven Ammonia Compression Machine, complete
with Condenser, Coils, Brine Tank, Pumps, Ice
Cans, Boiler, Stack and all paraphernalia to make
a complete plant, at bargain price to quick buyer.
Write for general machinery bargains.

CHAS. BEHLEN, 72 Trinity Place, New York.

FOR SALE.—Engine 13"x24", \$200; 12"x16", \$200.
Traction Engines 10 and 12 Horse, \$350 each; 10
and 12 Horse Portables on wheels, \$175 each. En-
gine Lathe 20" swing, \$125. 18" swing 10' Bed En-
gine Lathe, \$100. Pratt & Whitney Drill Presses,
\$15 each. Five Boilers 56"x18", 30 Flues 6" dia.,
\$500 each. Upright Boilers, Engines, Hoisting
Engines—all sizes. 20, 30, 35-Horse Portable
Boilers with Engines to match. Engines, Boilers,
Iron and Wood-Working Machinery of every de-
scription at buyers' prices. D. L. CASEY MCH.
CO., Springfield, Ohio.

BIG BARGAIN.—Tw and one-half actual horse
power Gasoline Engine. Will drive more ma-
chinery than many so-called three and four horse
power steam engines. Money refunded if engine does
not show 2½ horse power, break test. BACKUS GAS
ENGINE CO., 216 Lake St., Chicago.

FOR SALE.

One 8-horse power Upright Engine,

One 9-horse power Upright Boiler.

One 11-horse power Upright Boiler.

E. J. CODD CO.,

700 S. Caroline St., Baltimore, Md.

FOR SALE.

We carry a large line of Engines, both new
and second-hand, in stock—cross-compound
Corliss, tandem-compound Corliss and simple
Corliss from 1500 H. P. down to 75 H. P.

Automatic Engines, every size and make—
slide and piston-valve Engines from 1000 H.
P. down to 5 H. P.

BOILERS—Water tube, horizontal tubu-
lar, locomotive Boilers, etc.

HEATERS—Open and closed heaters, all
sizes and makes.

MACHINE TOOLS—Lathes, planers, shap-
ers, drill presses, chucks, emery wheels,
power punches, etc.

BLOWERS, Exhaust fans, shafting, pul-
leys, hangers, valves, governors, belting and
pipe.

PUMPS—All sizes and makes from 3,000,000
gallons down.

CONDENSERS—Deane, Nordberg, etc.

ELECTRICAL MACHINERY.

1 600-light Edison incandescent dynamo.

2 400-light Edison incandescent dynamos.

1 60-light Thomson-Houston incandescent
dynamo.

1 65-light Brush arc.

1 60-light Wood arc.

1 50-light Thomson-Houston incandescent
dynamo.

1 30-light Brush dynamo.

ROLLING-MILL MACHINERY.

One 18" sheet mill, one 18" sheet-bar mill,
one squeezer, iron and wooden jib cranes,
traveling cranes, rotary shears, hydraulic
pumps, floor-plate, buggies, etc.

STEAM HAMMERS.

4000, 1200, 700 and 400 pounds double-legged
Morgan.

275 pounds single-legged Kline.

ICE AND REFRIGERATING PLANT.

One pair of Pictet horizontal Ice Machines,
consisting of two Corliss Engines, 16"x38",
and ammonia Compressor, 10"x38" (ammonia
end being new and manufactured by the
Vilter Manufacturing Co., Milwaukee, Wis.);
capacity of each machine 25 tons ice or 50
tons refrigerating.

The above is a very fine machine, thor-
oughly overhauled, and has just been sold to
us by a Pittsburg firm, who replaced it with
a machine of much larger capacity. Price
\$4500 f. o. b. Pittsburg.

PUMPS—FOR WATER-WORKS.

One Worthington Duplex 25x20x25, rods
3½" diameter, displaces 32,000 gallons per
stroke, 110 strokes per minute. Total ca-
pacity over 5,000,000 gallons in twenty-four
hours. Weight about 40,000 pounds.

WICKES BROS., 45th St. & A. V. Ry., Pittsburg, Pa.

Main Offices and Works, SAGINAW, MICH.

Branch Offices,
96 Liberty St., NEW YORK.

1214 Marquette Bldg., CHICAGO.

READ THIS!

If you are in the market for a second-
hand Boiler and Engine, Steam Pump,
Feed-Water Heater, Steam Trap, Dyna-
mos, second-hand Belting, Pulleys,
Hangers and Shafting, second-hand
Steam Pipe, any size or quantity;
Wrought Iron Tanks, Smoke Stacks of
any kind, kindly communicate with us,
as we are in a position to fit you out,
and will guarantee perfect satisfaction or
refund the money and bear all expenses

JOHN HENNING & SON,

1015-20 East Susquehanna Ave., Philadelphia, Pa.

WANTED.

Second-hand Guillotine Scrap Shear, with or
without engine attached, 40 to 50 in. knife, capa-
ble of shearing 1 in. plate. Also second-hand
Alligator Shear, with or without engine attached,
capable of cutting 3 in. square. Must be in good
condition. Address

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2 Gravity Drums, 5' diam.x6'; friction brake both
ends; as good as new.

1 do. new.

1200 feet of ¾" Wire Cable.

2 Dump Cars, hopper bottom; capacity 10 tons;
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NAGLE ENGINES AND BOILERS,
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One Pulp Stone 25"x44", with 5" steel shaft 7'
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Also one Baud saw Mill and Re-saw combined.
Five feet wheels for six inch saws.

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12 & 20' triple-gear pl. lathe.
96x14' Wilmarth, triple-gear.
46-64x30 double.
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49x14' Fitchburg, C. R.
37x23' Betts, plain rest.
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23x10 Draper, C. R.
30x22 New Haven, plain rest.
30x10 Draper, C. R.
27x8 Draper, C. R.
26x22 Netts shafting.
26x10 New Haven, C. R.
24x19 Betts, double rest.
24x10 Draper, C. R.
20x16 Putnam, R. & F. rest.
20x10 Harrington, C. R.
20x9 Pond Mach. Tool Co.'s plain rest.
20x8 Putnam, R. & F. rest.
19x11 Lodge & Davis, C. R. and taper.
18x8 Perkins, plain rest.
17x8 P. & W., R. & F. rest.
16x8 Harrington, R. & F. rest.
16x6 Fitchburg, R. & F. rest.
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15x6 Prentice Bros., R. & F. rest.
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14x6 Fitchburg, R. & F. rest.
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28" Stevens pulley.
22x7 Lodge & Davis turret chucking.
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12x8x30" bench on table.

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20' hydraulic bending rolls.
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127-40" 12 ply Giant Brand Revere Belt, never used.
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1 15x6 Prentice lathe, compound rest.
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1 22x9 New Haven lathe, compound rest.
1 30x30x10 Putnam planer.
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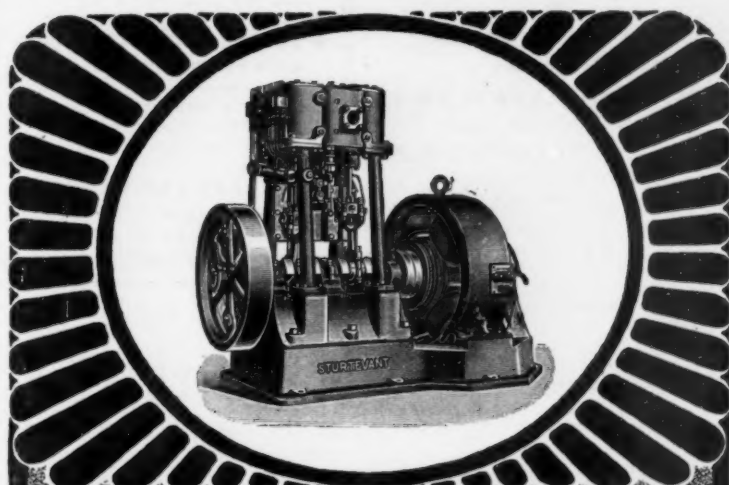
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DRY KILNS,
IRON KILN TRUCKS

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800 tons of 40 lb.
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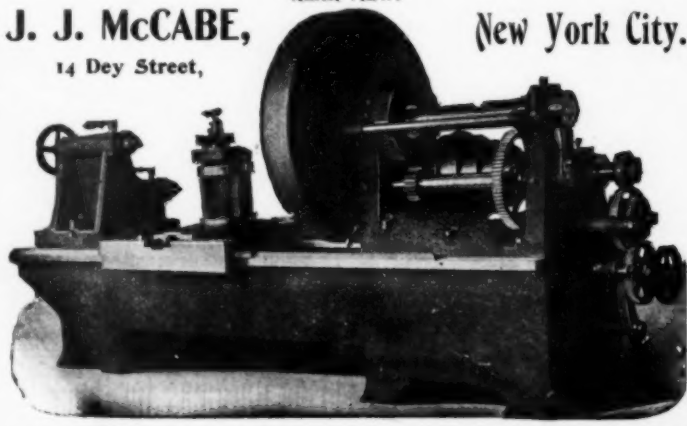
on heavy lathe work if you have only a little of it and have to keep a big, heavy lathe to do that little? Why, the interest on your investment will eat up every cent of profit you can make on such work, without counting the value of the floor space, which might be occupied by a profitable tool. Now, with this Heavy Pattern Double Spindle Lathe of McCabe's, you've got two mighty good lathes in one, and an easy way to better profits on heavy work. A lathe like this needn't stand idle a minute, because, when there's no light or medium work on the floor, it will do heavy work, and vice versa. It has a 26-inch swing, back-gear, for ordinary work, and does heavy work on a 48-inch swing, triple-gear, or with geared face-plate (ratio 66 to 1). It doesn't lack a single lathe feature that goes to produce better work and profits, and it costs about the same as a good, heavy lathe. Isn't it worth while to write for our full statement of this Lathe's advantages? Others have found it so.

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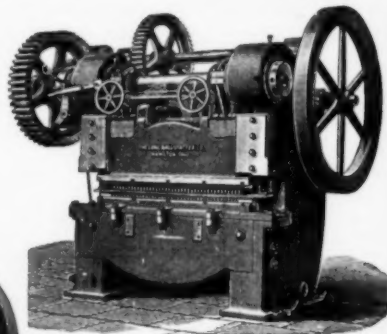
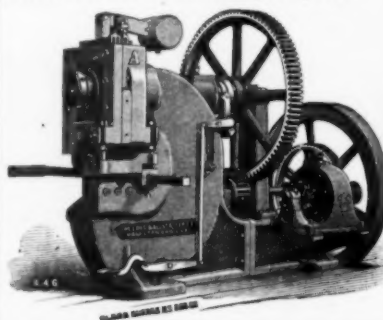
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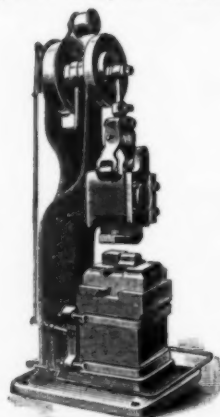
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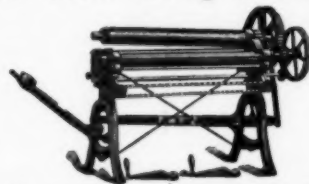
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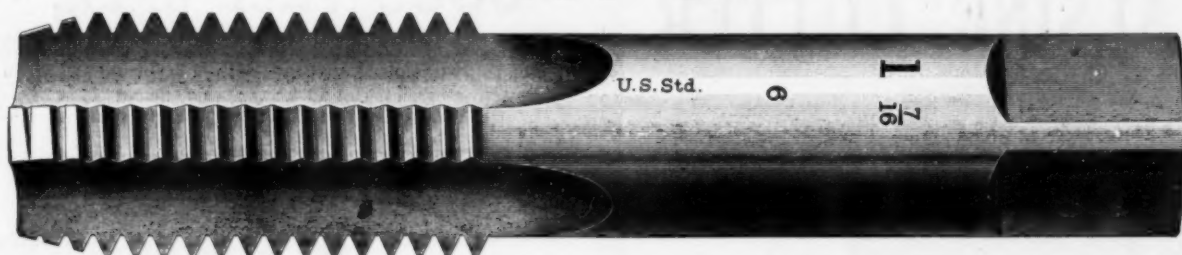
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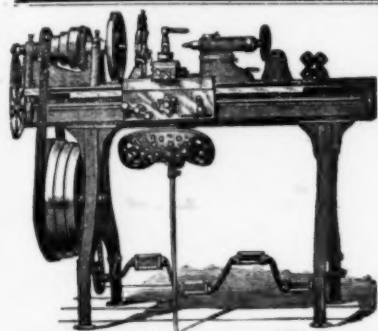
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6 Foot Geared Hand and Power Range Brakes.



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Four
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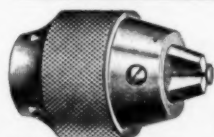
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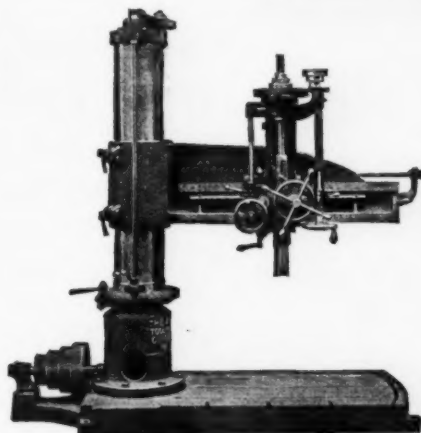
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Great convenience for the operator in manipulating head, back gears and tapping attachment.

Back gears on the head, making communication direct to spindle.

Sixteen speeds to spindle.

NO LOOSE NUTS OR WRENCHES.



5' PLAIN RADIAL DRILL.

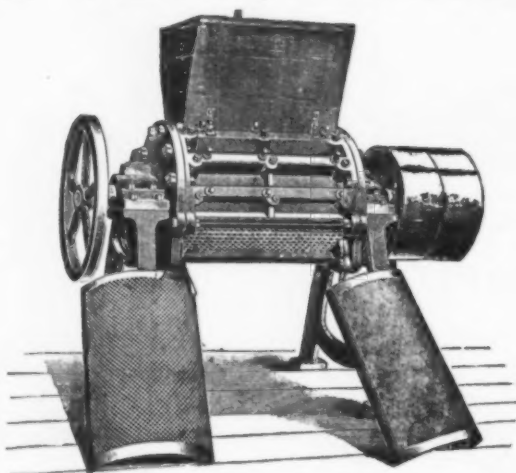
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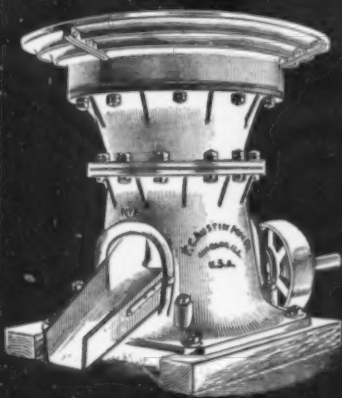
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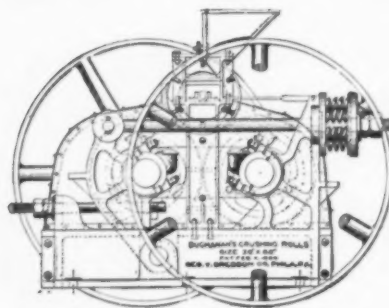
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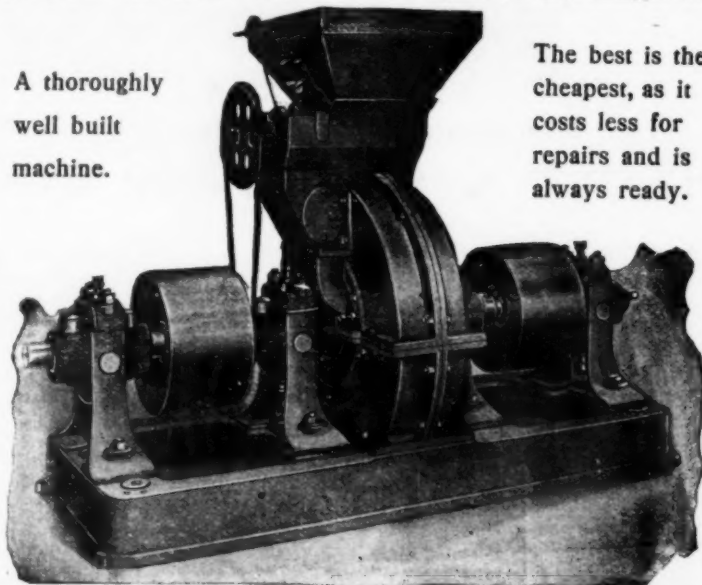
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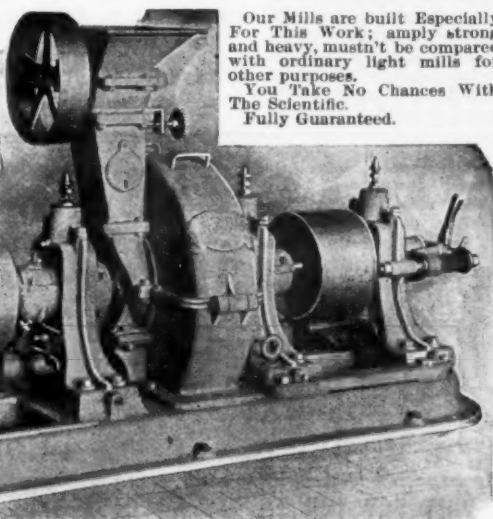
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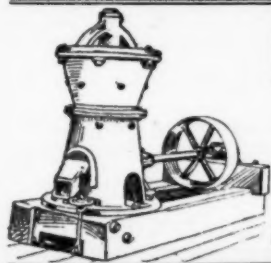
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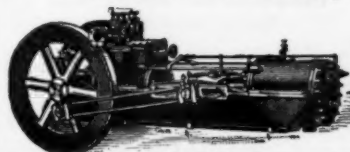


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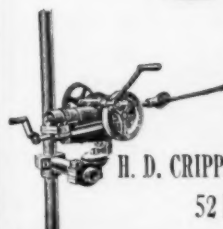
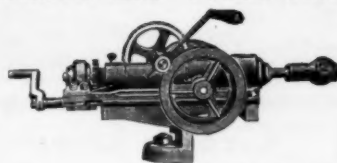


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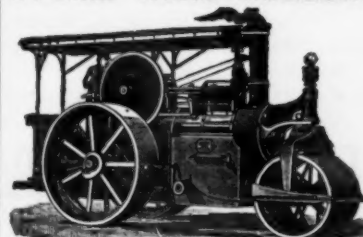
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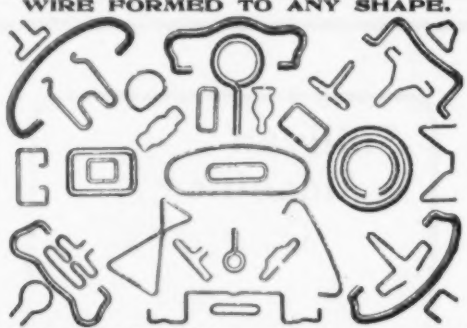
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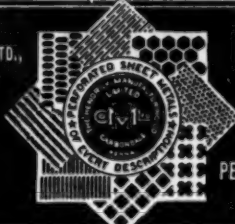
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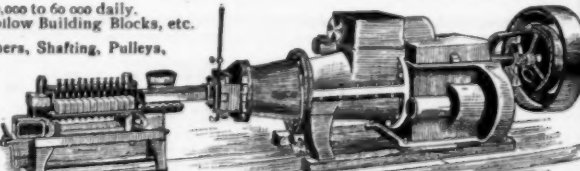
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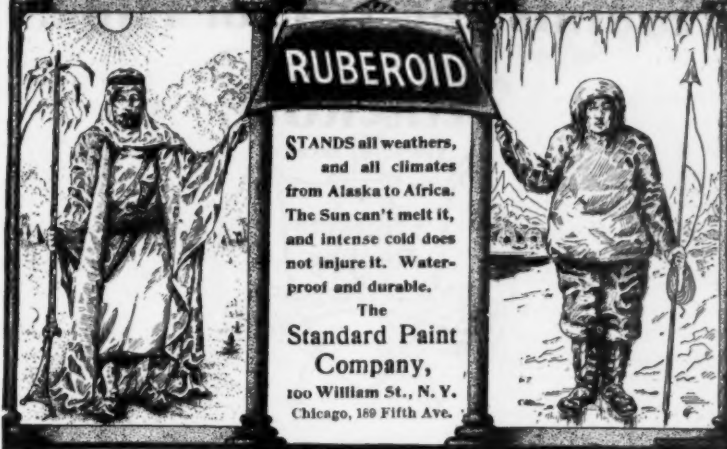
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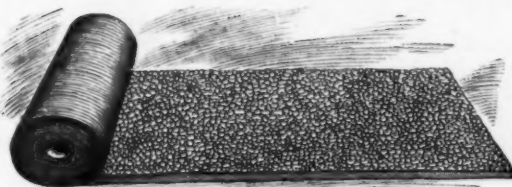
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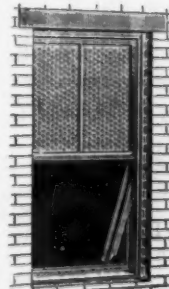
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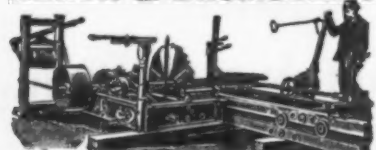
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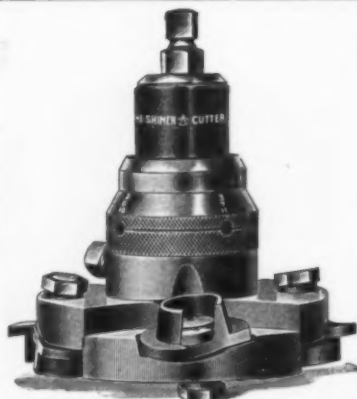
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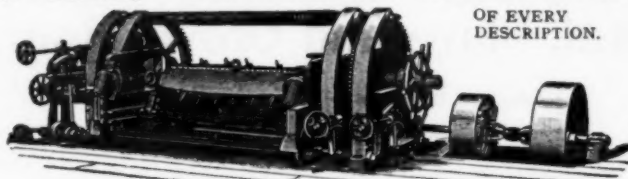
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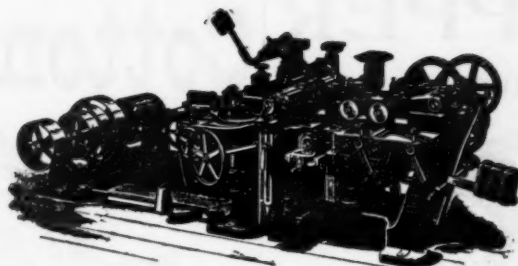
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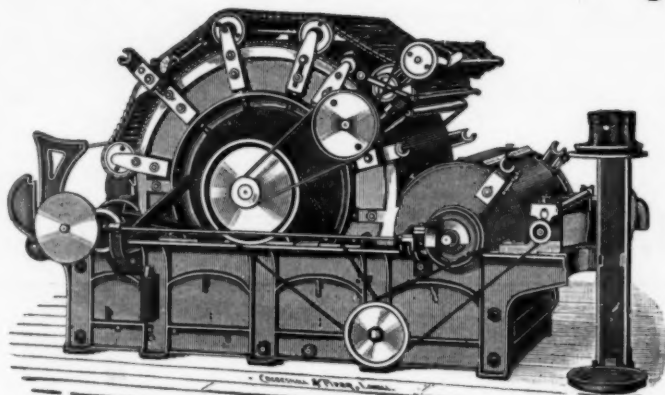
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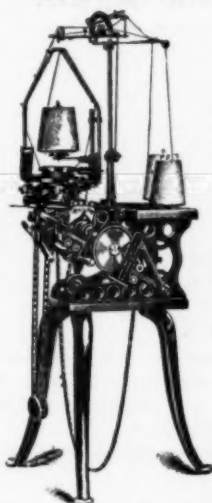
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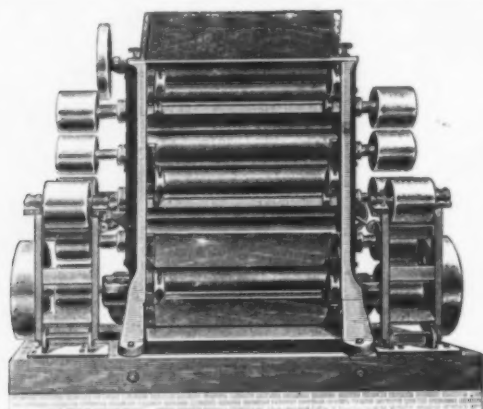
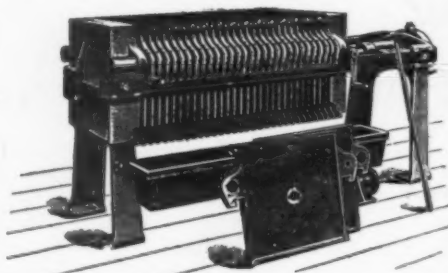
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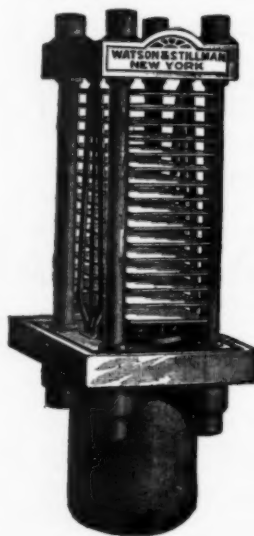
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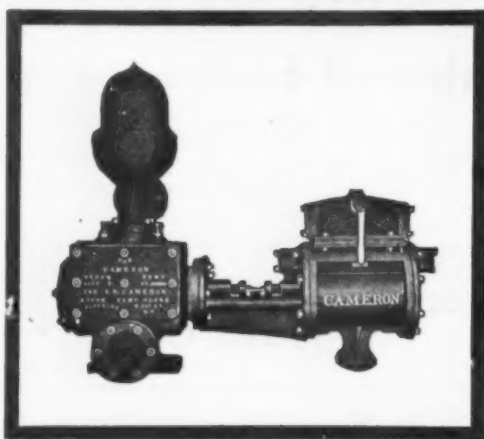
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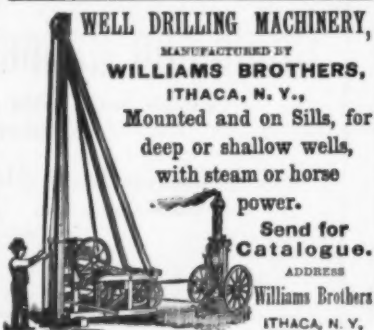
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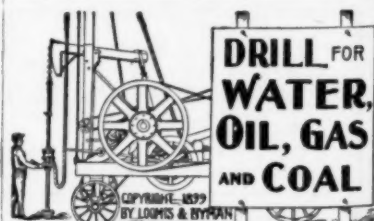
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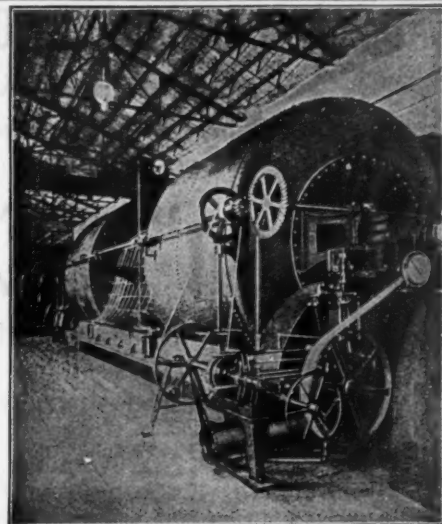
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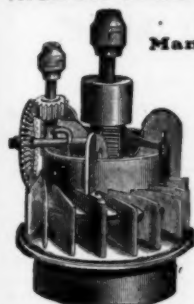
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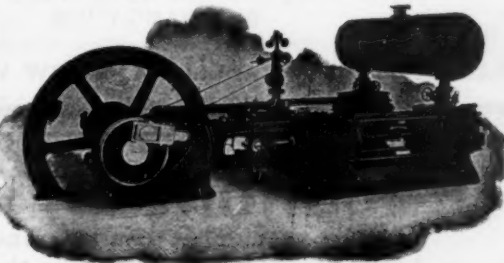
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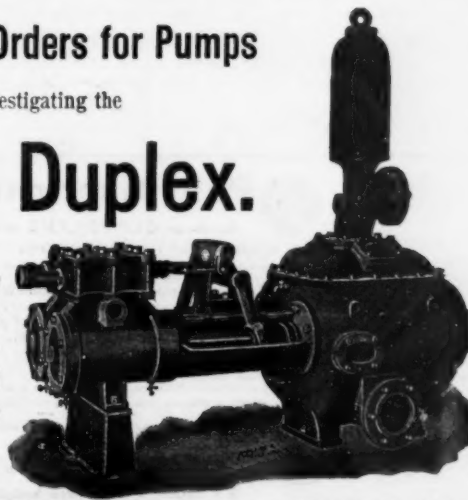
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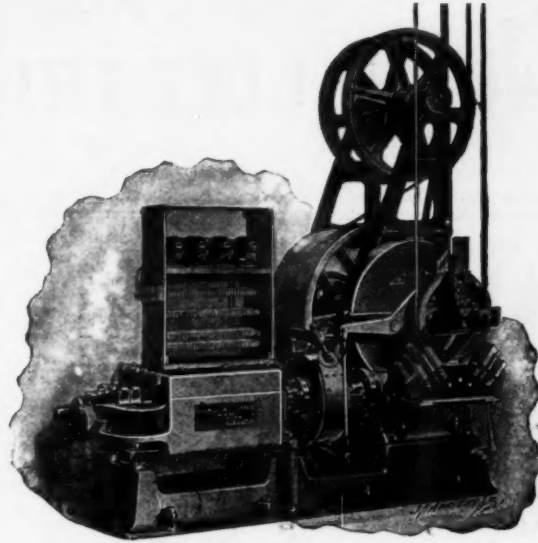
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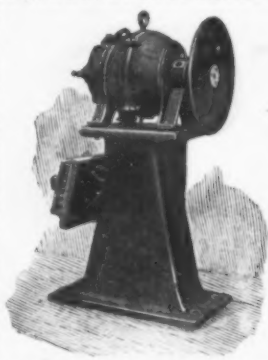
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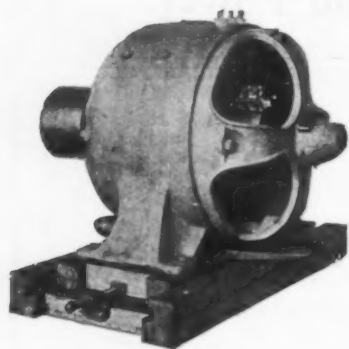
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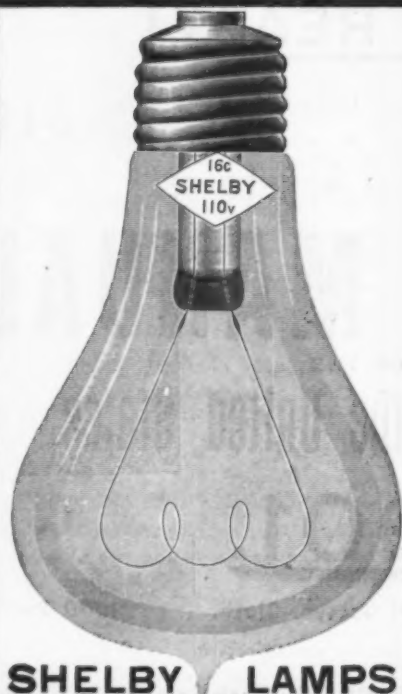
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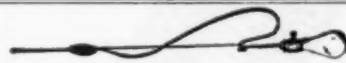
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